Draft Environmental Impact Report

VAN NESS AVENUE PLAN
82.392E

DRAFT EIR PUBLICATION DATE: August 21, 1987
DRAFT EIR PUBLIC HEARING DATE: October 8, 1987
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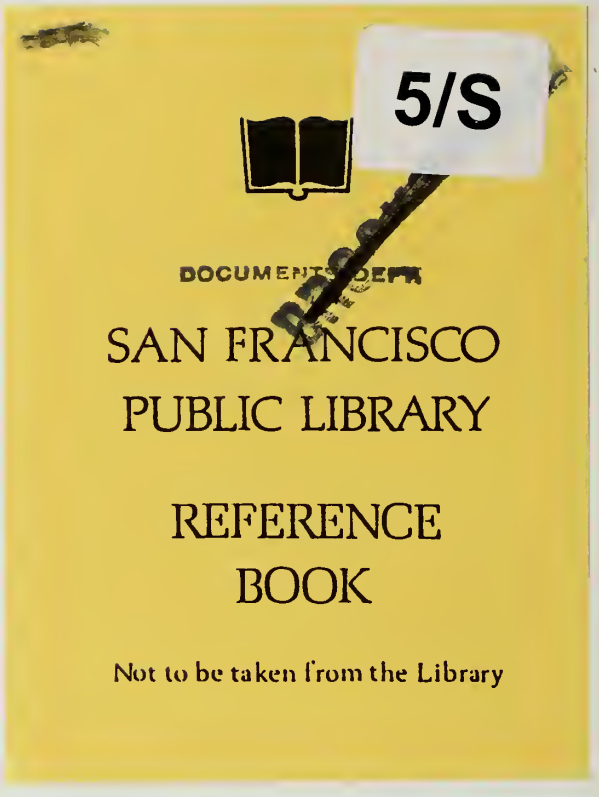
CITY AND COUNTY OF SAN FRANCISCO DEPARTMENT OF CITY PLANNING



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VAN NESS AVENUE PLAN
DRAFT ENVIRONMENTAL IMPACT REPORT

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I. SUMMARY

A. Project Description

The Department of City Planning is proposing a Van Ness Avenue Area Plan covering 54 blocks or portions thereof, extending the length of Van Ness Avenue from McAllister Street north to the Bay shoreline. The project area encompasses 279 parcels. The majority of these parcels front on Van Ness Avenue, while about 30% front on intersecting east-west streets.

The proposed project is a plan which would establish policies and guidelines for future development along Van Ness Avenue. The land use objective is to create a new residential neighborhood close to downtown which would contribute to the City's housing supply. In addition, there are proposed policies that would permit development of commercial uses to serve both the new housing population as well as the regional market. The Plan would be implemented through a rezoning of the Plan area. Neither the Plan itself nor the rezoning would produce the actual buildout of the Van Ness corridor. Together, they would set forth the enabling land use legislation which would require new construction between McAllister St. and Broadway to:

- Provide at least three square feet of residential space for every one square foot of commercial space;

- Adhere to a 40-foot height limit as of right and a 130 or 80-foot height limit with conditional use authorization, with a 4.5 to 1 (in the 80-foot height district) or 7 to 1 (in the 130-foot height district) Floor Area Ratio;

- Provide tapered mid-rise, mostly residential towers within the height limit.

The proposed Plan would contain policies to encourage the preservation of about 35 buildings of architectural, historical, or cultural significance in the Van Ness Avenue Corridor.

In order to be adopted as city policy, the San Francisco Master Plan would be amended to include the Van Ness Avenue Plan, which outlines objectives and policies to guide future development in the area. The Plan would be implemented in part through zoning provisions of a Van Ness Special Use District ordinance, which would extend from McAllister Street to Broadway, and in part through a city-initiated rezoning of most lots between Broadway and Bay St. The establishment of such a special use district would require amendments to the City Planning Code and Zoning Map. The city-initiated rezoning of the area between Broadway and Bay Street would require amendments to the Zoning Map only.

The exact time frame for actual buildout of the Van Ness Avenue area under the proposed Plan cannot be determined since the City has no control over timing of private property development. However, for the purposes of this environmental analysis, development of most underdeveloped sites was assumed to occur by the year 2000 (for an explanation of the methodology used in projecting probable development along the Avenue under the provisions of the Van Ness Plan and Special Use controls, see p. 57).

B. Environmental Setting

The Van Ness Avenue Plan study area reflects a mixed residential and commercial character defined by small-scale apartment buildings north of Broadway, and one-to four-story commercial buildings with an occasional seven-or eight-story building interspersed south of Broadway. At about 9.1 million square feet of gross building area, the study area's overall intensity of development reflects an average overall Floor Area Ratio (FAR) of 3 to 1, including all residential development.

The majority of the 54-block project is zoned for commercial use; two small areas are zoned for public use (P - Public Use District) and two small

areas are zoned for residential use (RM-1, Residential Mixed, Low Density and RM-2, Residential Mixed, High Density). Existing height limits rise north of the Civic Center and follow the contour of the land, declining gradually from 130 feet to 40 feet toward the shoreline.

In addition to the project area's basic C-2 zoning designation, an Automotive Special Use District overlay applies to most of the area along Van Ness between Golden Gate Avenue and Clay Street. It allows certain auto sales and repair activities which would not otherwise be permitted in a C-2 district. Also, the west side of Van Ness Avenue from McAllister to Bush Streets lies within the San Francisco Redevelopment Agency's Western Addition A-2 Redevelopment Area.

There are approximately 2,450 dwelling units providing housing for approximately 3,600 persons. About 11,800 workers in office, retail, hotel, school, church, parking and government-related occupations are employed in the study area.

There are two official city landmark buildings within the boundaries of the Van Ness Avenue Plan, and 33 buildings which were rated in the Department of City Planning's 1976 survey of the city's architecturally significant buildings. Ten of the surveyed structures have summary ratings of "3" or greater (up to a maximum rating of "5"), and are therefore considered architecturally significant. In addition, 47 buildings within the study area have been rated by the Foundation for San Francisco's Architectural Heritage (Heritage) in a preliminary analysis of the Van Ness Avenue area. The 1976 City Planning survey and the documentation by Heritage are a tool for assessing a building's architectural, historical, or cultural significance; these ratings by themselves do not impose restrictions on the structures. The information contained in these surveys may be used to evaluate a building's eligibility for City Landmark status.

C. Environmental Impacts

An Initial Study and EIR requirement was published on June 10, 1983 for this project (see Appendix III, page A-//). It was determined that the proposed project would have no significant effect in the following areas: Utilities/Public Services, Biology, Geology/Topography, Water and Hazards. The EIR will therefore not provide further discussion on these issues, with the exception of information on seismicity. The EIR will analyze the following areas of impact: Land Use; Urban Design; Transportation; Air Quality; Population; Housing and Employment; Cultural, Historic Resources and Energy.

Land Use Impacts

The majority of the Van Ness study area (McAllister Street to Broadway) would be rezoned for high density residential/commercial mixed use (RC-4) development, with a Special Use District overlay containing specific provisions. A smaller portion of the Van Ness study area (Broadway to Chestnut Street) would be rezoned for medium density residential/commercial mixed use (RC-3) development. In the proposed Special Use District, residential development would be required as a condition for most new commercial development between McAllister Street and Broadway. The Plan's proposed height limits would allow development up to 40 feet in height as of right, and up to 130 feet in height (between McAllister and California Streets) as a conditional use. North of California Street, maximum height limits taper off to 80 feet, 65 feet, and 40 feet. For the area between McAllister and Broadway, the proposed Plan includes bulk controls designed to encourage the construction of slender, mid-rise towers. Within this area, residential density as well as dwelling unit size and density would be governed by conditional use criteria as proposed in the Plan in addition to other existing Planning Code requirements for required open space, minimum unit size, and parking.

The EIR analysis is based on potential floor area that could be expected to be built on underdeveloped parcels ("soft sites") in the study area. Fifty

parcels were identified, which could be assembled into 27 development sites. The development potential of these sites, given the proposed zoning, could result in about 2 million square feet (MSF) of new residential building area, 630,000 square feet of new retail space, and 480,000 square feet of new office space. Because many of the sites upon which this development would take place currently contain commercial space, net retail space under the Plan would decline by about 100,000 square feet and net new office space would increase by about 380,000 square feet. Most of the increase in office space would occur through assumed conversions of significant buildings (auto showrooms). Overall, a net increase of about 1.7 million square feet (MSF) of building area, representing about a 26 percent increase over the existing amount of development, could result from the Plan and its implementing rezoning. About 2165 net new dwelling units could be built, nearly doubling the existing 2460 units in the Plan area.

Visual Quality and Urban Design

Full realization of the Plan would result in a mix of retained older buildings and new buildings of varying heights between 40 and 130 feet. Development guidelines governing new development include bulk controls to ensure adequate separation and tapering of new mid-rise towers, and setback controls aimed at the creation of an interesting and harmonious streetwall along Van Ness Avenue.

Wind speeds would be expected to increase locally as more structures would be built under the provisions of the proposed Plan. Similarly, shadows cast onto Van Ness Avenue and its sidestreets would increase throughout the day. The extent to which these impacts would occur would be more fully evaluated upon review of specific proposals for development. Preliminary shadow analysis of buildings developed to the maximum height and bulk permitted under the proposed Plan indicate that the greatest shadow impacts would occur on the east-west side streets intersecting Van Ness Avenue, especially during the non-summer months. Van Ness Avenue would not be completely shaded by any structure allowable under the proposed Plan, except for the three winter months. At no time would Polk or Franklin streets be shaded. Urban design

guidelines included in the proposed Plan would be applied to minimize the wind and shadow effects of new buildings. New buildings would be required to limit ground level winds to 11 m.p.h. in areas of pedestrian use and 7 m.p.h. in public seating areas.

Cultural and Historic Resources

The Van Ness Avenue Plan recommends preservation of about 35 buildings which have been identified in the Plan as architecturally significant and which individually contribute to the collective urban design and identity of the Avenue. The preservation policies are designed to protect the Avenue's most distinguished architectural resources and to enhance the urban design and general livability of Van Ness as an attractive residential boulevard. The policies would be considered by the City Planning Commission through its review authority of conditional use applications for new development or alterations in the Plan area.

Although the various economic incentives indirectly provided by the Plan and the proposed Master Plan policies would likely result in the preservation and rehabilitation of some buildings recommended for preservation, the potential vulnerability to demolition of some buildings of merit would still exist in the absence of strong legislation mandating their preservation.

Population, Housing and Employment

The proposed Plan permits residential density to be based on height and bulk limitations. Based on an average unit size of 800 square feet, the proposed plan could result in an increase of housing along Van Ness Avenue of about 2,200 new dwelling units. Residential population of the Plan area would increase by about 3,200 persons based on existing area household size data, resulting in a total of about 6,700 persons, nearly double the existing population. Under development potential assumptions, 24 existing housing units would be lost to demolition and new construction.

A net increase of up to 1,100 employees could be located in the area given the development potential under the proposed plan. Approximately 11,800 jobs currently exist within the area.

Transportation

New development and conversion of existing uses under the proposed Van Ness Avenue Plan would generate about 19,100 net additional daily person trip ends (PTE), about a 9% increase over existing conditions. The proposed development potential would add approximately 3,900 net additional PTE during the two-hour P.M. peak period (4:00-6:00), and would increase P.M. peak hour (4:30-5:30) trips by about 3,000 PTE.

Development under the Van Ness Avenue Plan could generate about 700 net additional vehicle trips during the peak hour and 850 net new vehicle trips during the peak period. Additional peak hour vehicle trips on any one street in the Plan area would be limited to 100-150 in the case of Van Ness and Franklin Streets, and 50 or less for all other streets in the area. Levels of service at some critical intersections and streets would be reduced a maximum of one step as a result of the combined impact of Van Ness Avenue development and cumulative downtown development. Polk, Geary, Franklin and Pine Streets would experience reductions in level of service from "D" to "E." Van Ness Avenue would fall from "E/F" to "F" and Lombard Street from "E" to "E/F." The remaining streets in the project area would operate at levels of service "D" or better with the exception of Broadway, which would remain at "F."

Full Plan buildout would create approximately 800 additional P.M. peak hour Muni trips, which would contribute to cumulative impacts (in conjunction with downtown development) creating loadings at level of service "D" and "E" (crush loads are measured at worst level "F"). The number of additional passengers resulting from the Plan alone is small relative to the forecast cumulative increase by the year 2000.

Additional passengers on regional transportation carriers generated by Plan buildout would constitute a negligible portion of the overall increases forecast by the year 2000.

About 1,200 new off-street parking spaces would be provided for commercial development under the proposed Plan. The proposed Plan could create a demand for 750 long-term commercial parking spaces, and 350 short-term commercial spaces. There could thus be a potential deficit of about 250 off-street commercial spaces. Localized unmet demand could be absorbed by shared parking programs between the commercial and residential uses.

Under the proposed residential parking standard of one space per dwelling unit, there could be 530 parking spaces provided above the residential demand anticipated. With a one parking space per four dwelling unit standard, there could be an unmet residential parking demand of about 1,110 spaces. Total new off-street parking spaces resulting from commercial and residential development potential under the proposed Plan could total between 1,750 and 3,400. Total parking demand could exceed total new supply by as much as 1,360 spaces (under a one parking space per four dwelling unit standard), or total supply could exceed anticipated demand by about 280 spaces (under the Plan's recommended one space per dwelling unit standard). Overall on-street parking conditions are forecast to be similar to existing conditions.

Air Quality

Air quality impacts associated with the development potential under the proposed Plan would result primarily from increased vehicle emissions. Combustion of gas for space and water heating would also generate pollutants. Currently, the eight-hour CO standard is estimated to be violated along Van Ness Avenue. CO concentrations are predicted to be less in 2000 than in 1984 and would not violate one- or eight-hour standards at any intersection under Van Ness Avenue and downtown cumulative growth scenarios. Emissions associated with development potential under the Van Ness Avenue Plan and with cumulative development under the Downtown Plan are not projected to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone. Nitrogen oxide (NOx) emissions generated by cumulative development (including the Van Ness area under the proposed Plan) throughout the Bay Area could increase nitrogenous oxidant concentrations and acid rain downwind, outside the region. The

potential contribution of Van Ness development would be relatively small. Emissions of total suspended particulate (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of violations of the TSP standard in San Francisco, with concomitant health effects and reduced visibility. Emissions of sulfur oxides (SOx) generated by the project and cumulative development would not bring San Francisco's sulfur dioxide (SO_2) concentrations measurably closer to violating the standard.

Noise

The noise environment along Van Ness Avenue is dominated by vehicular traffic noise. The Environmental Protection Element of the San Francisco Master Plan indicates an average day-night noise level (Ldn) of 80 dBA along the Avenue in 1974. The Environmental Protection Element of the Master Plan contains guidelines for determining the compatability of various land uses with different noise environments. For residential use the guidelines recommend a detailed analysis of the noise reduction requirements and inclusion of noise insulation features into the building design. Interior noise levels of new residential buildings would also be subject to noise insulation requirements contained in Title 24 of the California Administrative Code. The proposed Plan would recommend the design of buildings to reduce noise exposure by the creation of interior courts and setbacks from the main street level. All new construction would have to comply with the requirements of Title 24 and the Master Plan. Noise generated from traffic on the Avenue could impact sites proposed for open space use in future development projects. The amount of impact would vary depending on the type of open space use.

Energy

Annual electricity demand of Van Ness Avenue Plan development would be about 24 million kWh; about 65% would be generated by commercial uses. Natural gas demand generated by development potential on the Avenue is estimated to be about 204 million cubic feet of natural gas per year, of which

about 93% would be attributable to residential consumption. The natural gas and electricity required for the development potential under the Plan in year 2000 would be about 469 billion BTU per year, equivalent to about 84,000 barrels of oil per year, or approximately 170,500 BTU per square foot of development.

Total development in the Van Ness Plan study area, including existing development, would result in an estimated annual energy requirement of 1.130 trillion BTU, or approximately 241,000 barrels of oil per year equivalent.

Alternatives

Four alternatives to the project were examined. Under the No Project alternative, existing height, bulk and land use controls would continue to regulate future development. Under this scenario, up to 2.1 million square feet (MSF) of net new building area could be developed. Overall building area on Van Ness Avenue would increase by about 26 percent over the existing level of development; commercial space would increase by about 36 percent (1.7 MSF), and residential units would increase by about 18 percent (690 units). This alternative would accommodate about 8,560 new jobs. Due to the lower ratio of potential housing to potential employment, there would be greater competition for housing in the Van Ness Avenue area and in the the city-wide and regional markets than under the proposed Plan. This alternative could lead to loss of architecturally significant buildings. Compared with the Van Ness Avenue Plan, this alternative would produce about twice as many daily person-trips. Person-trips would increase by about 19% over existing conditions. Peak hour trips would be about 74% greater than under the Plan, and peak period trips would be about double the number which would be generated under the Plan. This alternative would not fulfill the objective of providing substantial new housing along Van Ness Avenue and would not protect architecturally significant buildings.

An Incremental Housing Requirement Alternative was studied, which would establish controls for Subarea 1 only; Subareas 2 and 3 would continue to be regulated by existing (primarily C-2) zoning, and current height and bulk

controls. The controls in this Alternative for Subarea 1 would operate within the existing height limits, but different bulk (setback) standards, different commercial-to-housing ratio requirements, and different lot sizes to which these ratios would pertain. Under this alternative, a maximum of about 400,000 net new square feet of commercial floor area and about 1900 new housing units could result. Actual development potential likely would be less. Significant buildings could be lost to demolition for new construction. The lack of architectural controls for smaller parcels could lead to tall buildings without setbacks that are out of character and scale with existing development. About 3,250 new jobs could be accommodated in the Plan area under this alternative, due to the office and retail development which could occur. Compared with the Van Ness Avenue Plan, this alternative would produce about 86% more daily person-trips. Daily person-trips would increase by about 17% over existing conditions. Peak hour and peak period trips would be about 35% and 51% more, respectively, than the number which could be generated by the Plan. This alternative would not provide incentives for housing construction to the same degree as the Van Ness Avenue Plan and would not protect architecturally significant buildings.

Under the RC-4 Alternative, the entire Van Ness Avenue study area (Subareas 1,2 and 3) would be regulated by RC-4 (Residential Commercial Combined, High Density) zoning controls and other existing applicable provisions of the Planning Code. Under this scenario, about 1.3 MSF of net new building area could be developed. A net loss of about 500,000 square feet of commercial floor area could occur, and approximately 2200 net new dwelling units could be built. Significant buildings could be lost to demolition. About 425 new jobs could be accommodated in the Plan area. Daily person-trips would increase by about 5% over existing conditions and would be about one-half the travel which would occur under the Plan. Peak hour and peak period trips would be about 16% and 24% less than that projected under the Plan, respectively. This alternative could result in the demolition of a number of architecturally significant buildings, thus weakening the urban design character of Van Ness Avenue. Because no incentives or requirements for the construction of new housing units would be offered, it is doubtful whether the project maximum estimate of 2,200 dwelling units would actually be constructed under this alternative.

Under the No Change Alternative, the existing setting would be maintained. Some kind of special controls would have to be legislated in order to preserve the status quo. Under this alternative, localized impacts forecast due to development under the Plan would not occur. However, cumulative impacts due to development elsewhere in the city and region would still occur. This alternative would freeze all development and change in the Van Ness corridor and would not fulfill the need for growth and change, particularly regarding potential housing resources.

II. PROJECT DESCRIPTION

General Background

In April 1981, the Mayor introduced "A Six-Point Program for Expanding Housing in San Francisco." The program recommends rezoning certain areas near the downtown to encourage housing development. One of the areas is Van Ness Avenue, which is envisioned as a major residential boulevard with mixed residential and commercial development.

The proposed Van Ness Avenue Plan was developed based on these directives and incorporates a set of land use and urban design objectives and policies which are intended to:

- o facilitate attractive and livable, predominantly residential mixed use development along Van Ness Avenue;
- o preserve architecturally significant buildings;
- o conserve existing low- and moderate-income housing within the study area.

The plan is proposed as a means of satisfying the housing needs of residents who wish to live closer to the center of downtown employment and cultural activities. It is expected that new housing along Van Ness Avenue would benefit those commuters who wish to reduce their commute time. Expanding the city's supply of housing to meet this demand would help to reduce the competition for existing housing.

Location

Van Ness Avenue is a major north-south crosstown thoroughfare which serves as a western edge for the City's downtown commercial and residential neighborhoods (see Figure 1). The Van Ness Avenue Plan encompasses portions of 54 blocks extending the length of Van Ness Avenue from McAllister Street north to the Bay shoreline (see Figures 2 and 3).

The 54-block project area encompasses 267 parcels. The majority of these parcels abut Van Ness Avenue, while about 30% front on intersecting east-west streets and have been included in the project area because, due to parcel configuration or existing height or zoning district boundaries, they relate more strongly to potential Van Ness Avenue development than to existing or potential Polk or Franklin Street development.

Project Description (The Plan and Rezoning)

The Van Ness Area Plan, proposed as a new component of the City's Master Plan, would direct future development within the study area. The Plan recognizes three sub-districts along the Avenue: A development area from McAllister Street to Broadway (Subarea 1), a housing conservation area from Broadway to Bay Street (Subarea 2), and a "gateway area" from Bay Street to the shoreline (Subarea 3). Refer to Figure 3, Base Map and Proposed Subareas.

Subarea 1 (McAllister to Broadway) is a mixed-use district featuring an auto row, hotels, motels, apartment buildings, restaurants, and a variety of other businesses serving city residents and visitors. Most of the parcels in this area have not been developed to their maximum limit under existing zoning, as many of the buildings are only two, three or four stories in height. The Plan identifies this area as appropriate for new, high density mixed use development consisting of residential above commercial uses.

Subarea 2 (Broadway to Bay) features medium-density apartment housing as a primary use: about 900 residential units in 24 buildings. The Plan calls for conservation of existing housing and medium density mixed use infill development (residential over commercial) in this area.

Subarea 3 (Bay to Aquatic Park) contains public uses (Galileo High School gymnasium and play field), two 18-story residential apartment towers (the Fontana) and a vacant office building currently under renovation (the Eastman Kodak Building). The portion of the area north of Beach Street is under the jurisdiction of the Golden Gate National Recreation Area. The northern portion of this subarea is an important open space resource for the City of

VAN NESS PLAN AREA

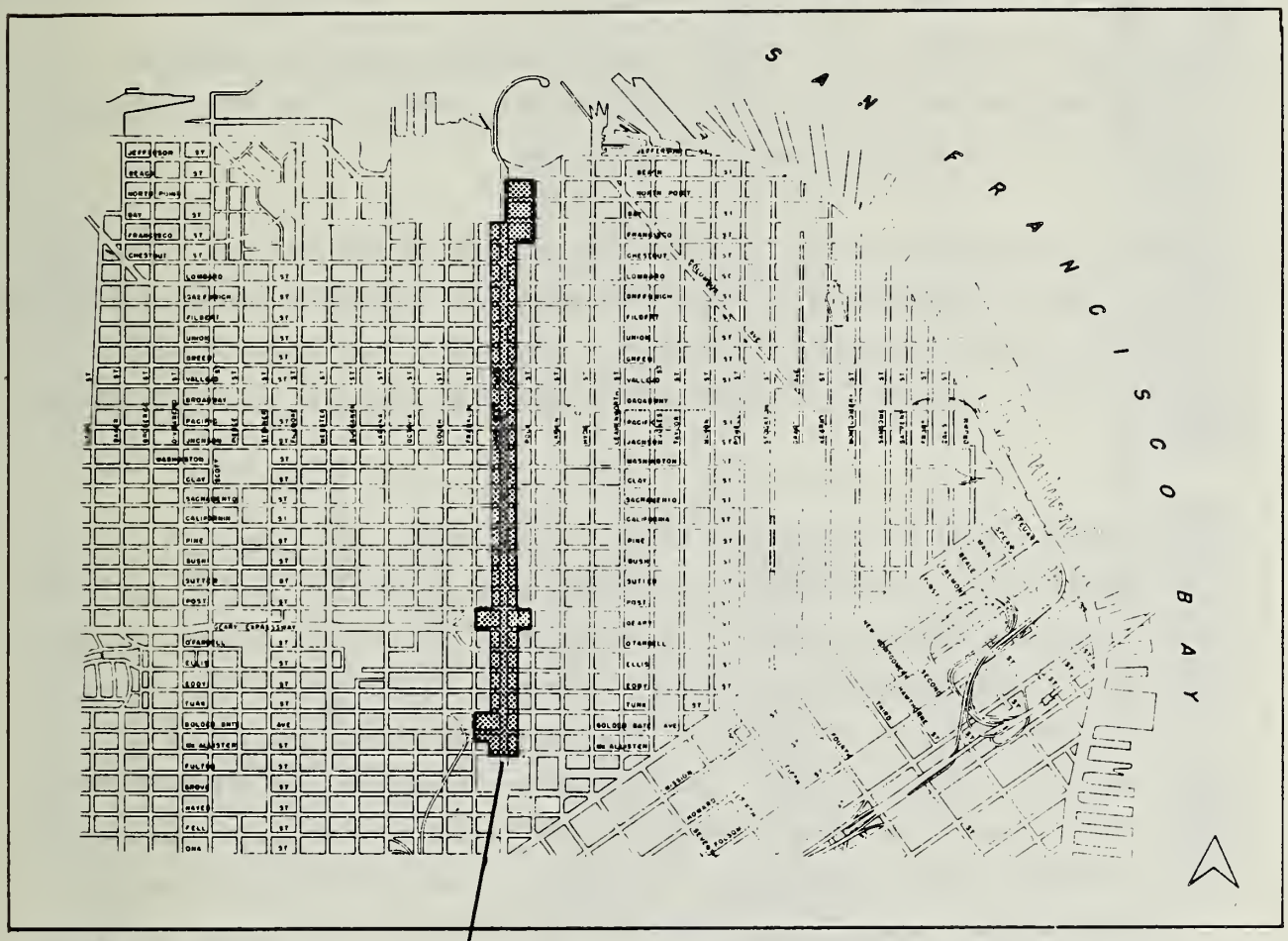


FIGURE 2

REGIONAL LOCATION MAP

STUDY AREA

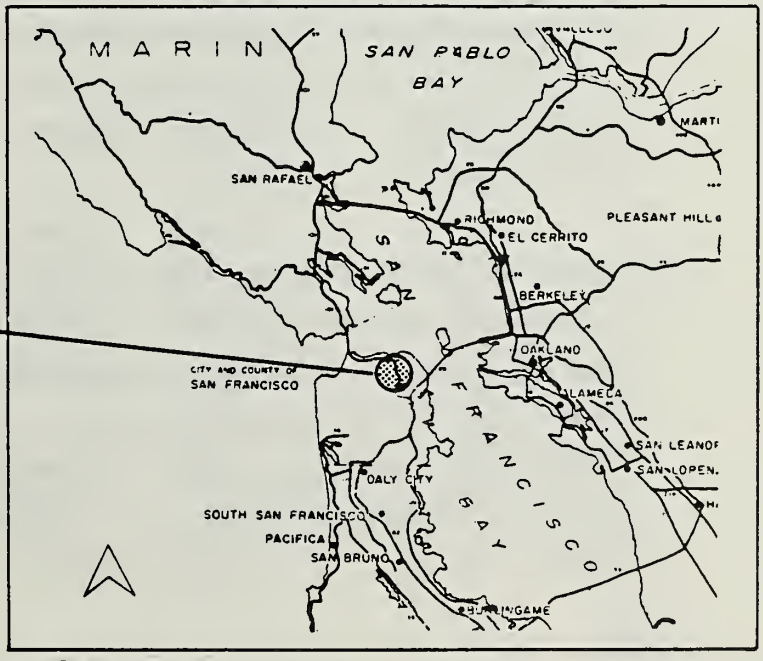


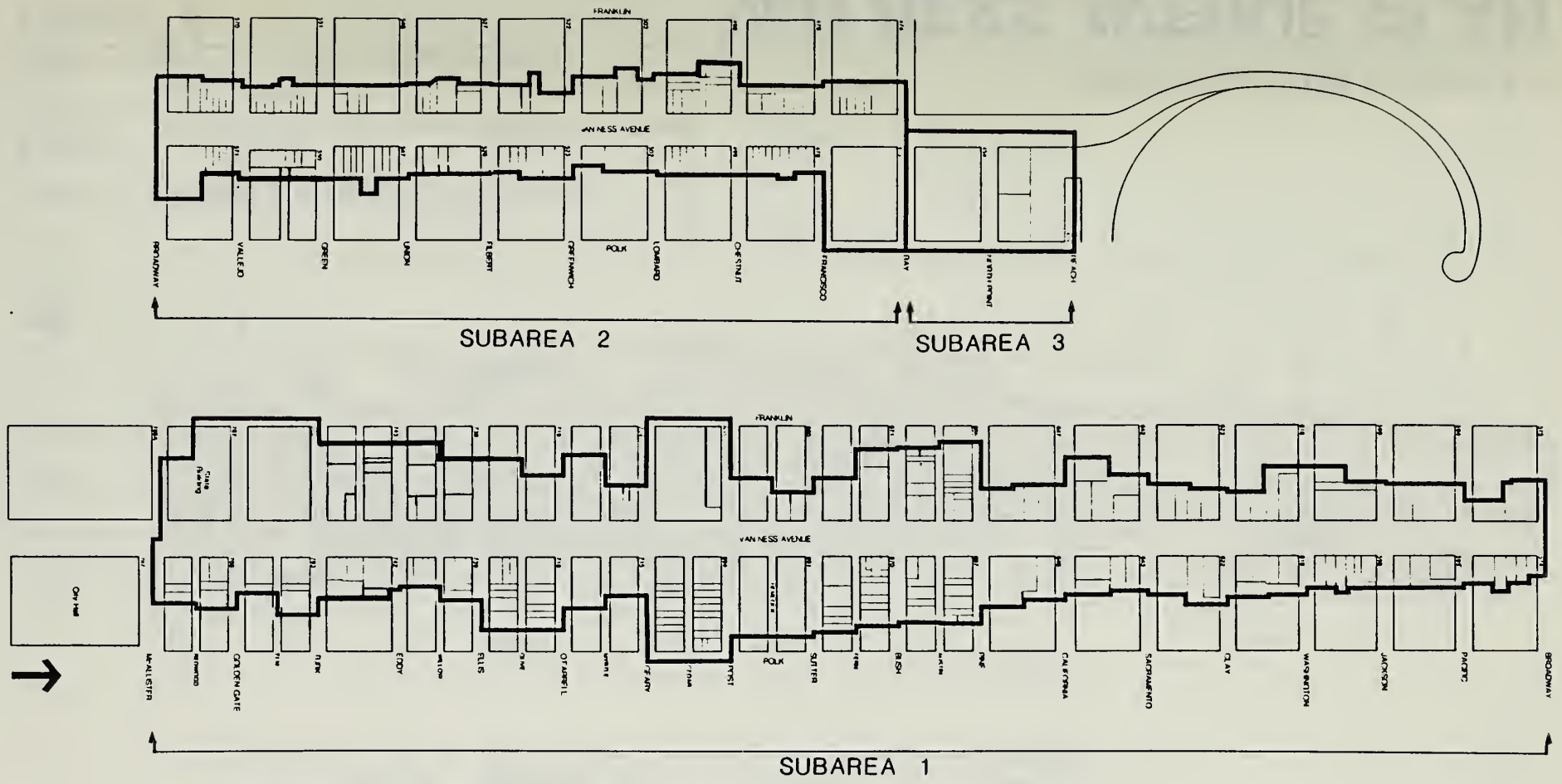
FIGURE 1

San Francisco and serves as a visual gateway between the wide open San Francisco Bay and the densely developed Van Ness Avenue. The Plan proposes enhancement of the gateway aspect of this area.

The overall objectives of the Plan are proposed to be met through new Master Plan policies and implementing zoning legislation. Proposed zoning and height and bulk districts are mapped in Figures 4 and 5 (following pages) and discussed below. The following measures would apply generally to the entire Plan area:

1. Preservation of architecturally, historically, and culturally significant buildings would be encouraged through Plan policies and suggested designation as city landmarks. Lesser buildings, not of sufficient importance to justify landmark designation, would be recommended to be retained if possible. Relevant proposed Plan policies recommend that: demolition or inappropriate alteration of historically and architecturally significant buildings be avoided; retention and appropriate alteration of contributory buildings be encouraged; relaxation of the residential use requirements and of parking requirements for buildings designated as city landmarks be allowed; and that architectural integration of new structures with adjacent significant and contributory buildings be encouraged. About 35 buildings are under consideration for designation in the Plan as significant.

2. The proposed Plan encourages conservation of existing rental housing throughout the Van Ness Plan area wherever possible. The implementing zoning controls would require conditional use authorization for the demolition of any existing housing. Review of the conditional use application would take into consideration the policies of the Van Ness Avenue Plan in addition to other applicable elements of the Master Plan.

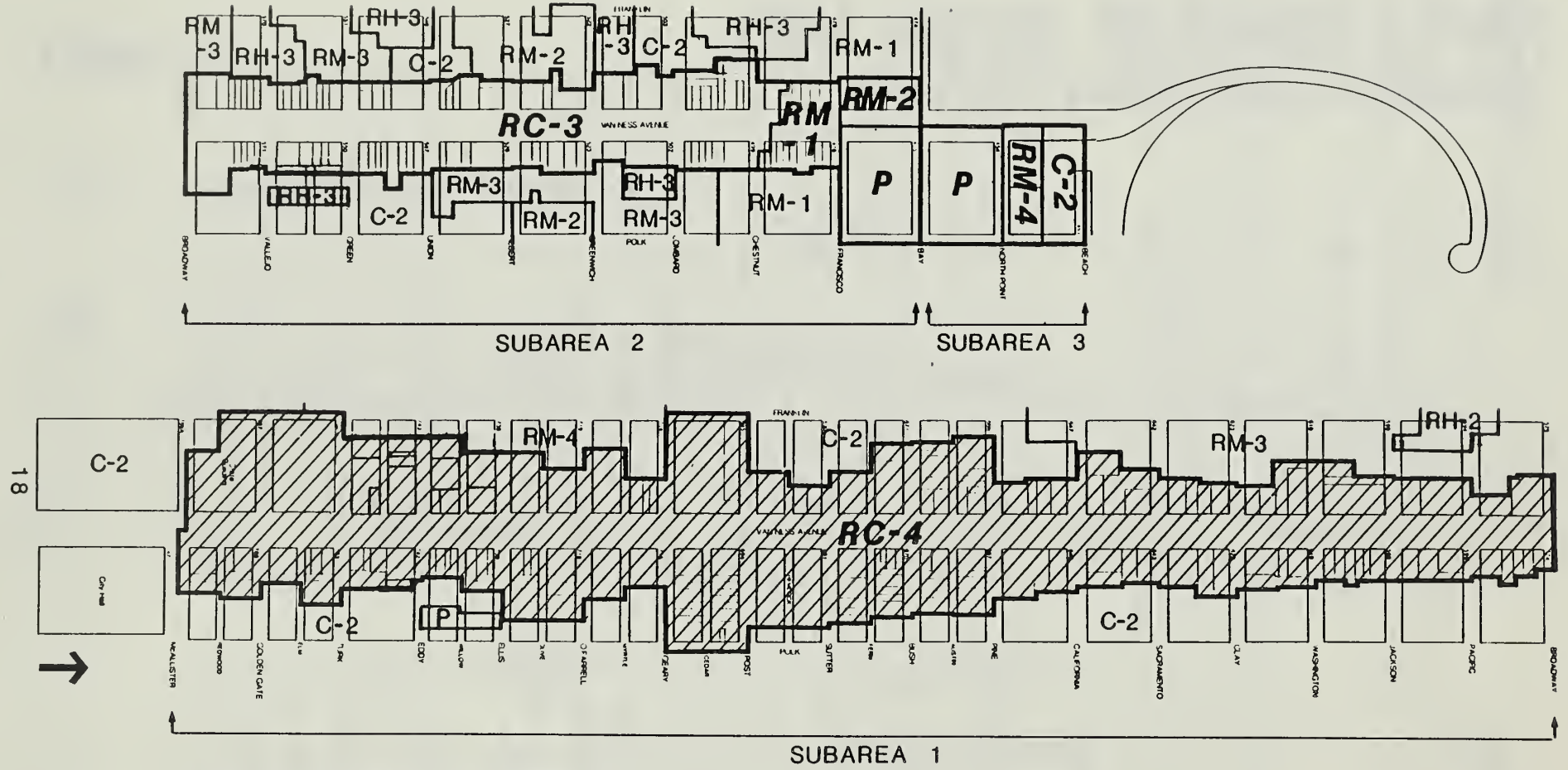


Van Ness Avenue Plan Area Boundary

BASE MAP AND PROPOSED SUBAREAS

FIGURE 3

VAN NESS AVENUE PLAN

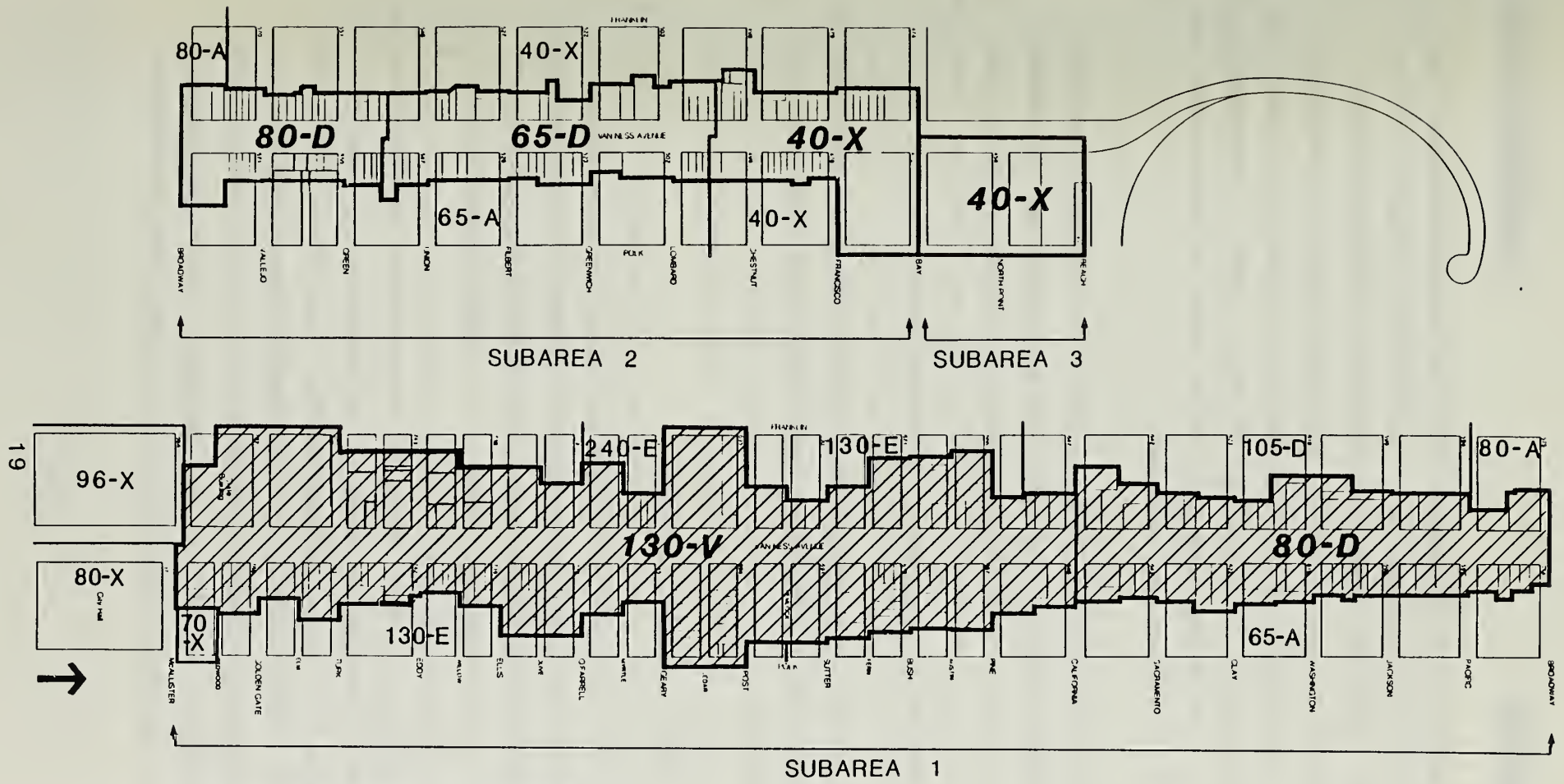


(Refer to Figure 7 for Existing Zoning Districts)

PROPOSED USE DISTRICTS

FIGURE 4

VAN NESS AVENUE PLAN



Van Ness Avenue Plan Area Boundary

Proposed Van Ness Avenue Special Use District

(Refer to Figure 8 for Existing Height and Bulk Districts)

PROPOSED HEIGHT AND BULK DISTRICTS

FIGURE 5

VAN NESS AVENUE PLAN

3. To give continuity to the street, the Van Ness Plan proposes that a uniform landscape/greenspace plan be adopted, incorporating tree plantings, decorative sidewalk treatments and improved street furniture that should be carried out by the City along the entire length of the Avenue. Decorative paving and additional landscaping in the median strip is encouraged by the Plan. A special sign district, proposed in the implementing legislation, would encourage clear and unobtrusive signage along the Avenue.

4. The proposed implementing zoning controls would maintain existing height limits within the Van Ness area except for the area between California Street and Pacific Avenue, where the existing 130-foot height limit would be lowered to 80 feet to facilitate the transition towards lower building heights in the north of the Avenue.

The preceding policies and implementing measures would be applicable to the entire Plan area. The following measures would apply to the various identified subdistricts:

Subarea 1 (McAllister Street to Broadway)

1. The present C-2 (Community Business) district would be changed to an RC-4 district (High Density Residential-Commercial Combined District) with a Special Use District overlay which would implement the objectives of the Plan for Subarea 1 and would replace the existing Automotive Special Use District. The Special Use District would be put into effect by a text change of the San Francisco City Planning Code and would specify building height and bulk, and commercial space limitations. The maximum allowable floor area ratio (FAR) in this area would include residential and commercial space and would be reduced from 10:1 (commercial only) to 7:1 in the 130-foot height district and 4.5:1 in the 80-foot district. The proposed height limits are equal to or less than the existing 130-foot limit.

2. The amount of commercial space allowed would be related to the amount of residential space provided. Under the proposed zoning controls, one square foot of commercial space would be allowed (but not required) for every three square feet of new residential space built. Three square feet of residential space would be required for every square foot of new commercial space built. Residential space could exceed the 3 to 1 residential to commercial ratio as long as ground floor retail activity were provided along the Van Ness frontage. Housing would thus be required to be built above lower floor commercial space. This is a change from the present commercial (C-2 - Community Business) district controls which allow housing but also allow wholly commercial uses to be built.

3. Under the proposed implementing zoning controls, the residential unit densities of each parcel would be based on building volume established by height and bulk controls; this departs from the established method of residential density controls which defines the allowable number of dwelling units strictly as a function of lot size (i.e. one dwelling unit is allowed for every XY square feet of lot area).

4. Under the proposed Plan, the size and mix of housing units within individual projects would be determined as part of the conditional use review process required for all buildings over 40 feet in height. Of course, all density limitations set forth in the Building Code would have to be adhered to.

5. Objectives of the proposed Plan would seek to encourage the provision of affordable housing by the proposed variable density controls which facilitate smaller unit sizes. Development of rental housing would also be encouraged through flexibility in dwelling unit size and design requirements. Plan policies encourage developers to work with the Mayor's Office of Housing and Economic Development to provide the maximum possible number of affordable housing units.

6. Buildings exceeding 40 feet in height would be subject to set-back requirements imposed by the Planning Commission through the Conditional Use process to insure the continuation of existing significant street wall heights.

7. Urban design objectives of the proposed Plan require new development adjacent to architecturally significant structures to harmonize with those buildings by continuing compositional features such as setbacks, horizontal lines (e.g., belt courses and cornices), window proportions, and overall facade divisions. The implementing zoning controls give the Planning Commission full discretion to require mandatory setbacks conforming with the established neighboring building heights for proposed buildings over 40 feet high. Thus, a generally uniform "street wall" or building height for Van Ness of about 80 feet should be established.

8. Urban design objectives of the proposed Plan require strong architectural articulation up to the 20 foot or second story level. Buildings would be required to be built to the front property line. Open plazas or arcades fronting directly on the street property line would not be allowed at ground level. Continuous commercial frontage along Van Ness Avenue would be required to a depth of 40 feet from the Avenue. Designed with careful consideration of building base design, articulation, texture and color, it is intended by the Plan to create a lively and interesting pedestrian environment, as would the provision of street trees and street furniture.

9. The proposed zoning controls would relax current rear yard requirements for new development between McAllister Street and Broadway if a comparable amount of open space is provided within the new development and if the interior block open space formed by the adjacent rear yards is not adversely affected.

10. Special sign controls would govern signage in the proposed Special Use District.

Subarea 2 (Broadway to Bay Street)

1. The proposed Plan's objective of housing conservation north of Broadway would be encouraged through a zoning change. Properties presently zoned Commercial (C-2) would be reclassified to a Medium Density Residential - Commercial Combined (RC-3) District which would allow ground floor commercial activity while protecting existing upper level housing from being converted to non-residential use. These properties would be subject to RC-3 zoning provisions as currently described in the City Planning Code; no text changes to the Planning Code are proposed. Properties presently zoned residential (RM-1, RM-2, RM-4) north of Chestnut Street would remain under those same zoning controls. This would encourage retention of sound rental housing. Unlike Subarea 1, height and bulk limits would not determine residential density. The density standards for this subarea would be those of the RC-3 district, permitting one unit for every 400 square feet of lot area. The RC-3 district limits as-of-right commercial uses to ground and below-ground level floors, with conditional use authorization required for upper-story commercial uses.

Subarea 3 (Bay Street to Aquatic Park)

1. Attractive, pedestrian-oriented uses along Beach Street would be encouraged to continue. The area's function as a visual terminus of the Avenue and a major outdoor recreation area for the City would be strengthened by full support in Van Ness Plan policies of the National Park Service's plans for improvements in this area. No rezoning is proposed for this subarea. Properties currently zoned C-2 (Community Business) and P (Public) would continue to be regulated by applicable provisions of the Planning Code.

Required Approvals

The Van Ness Avenue is an Area Plan providing guidelines for future development of the Van Ness Corridor. The Plan deals with aspects of the City's environment which are addressed more generally in other elements of the Master Plan, such as the Residence, Transportation, Urban Design, and Environmental Protection Elements. The Plan's objectives and policies are intended to deal with issues unique to the Van Ness area.

In order to be adopted as City policy, the San Francisco Master Plan would be amended by the City Planning Commission to include the Van Ness Avenue Plan. The Plan would be implemented in part through zoning provisions of a Van Ness Special Use District ordinance, which would supplement new RC-4 district zoning controls from McAllister Street to Broadway (Subarea 1). The establishment of such a special use district would require amendments to the City Planning Code and Zoning Map as well as approval by the City Planning Commission and the Board of Supervisors. The Plan provisions for Subarea 2 (Broadway to Bay Street) would be implemented through a City-initiated rezoning of all portions of this area now zoned C-2 to RC-3. This action would require approval by the City Planning Commission and Board of Supervisors. The proposed reduction of the height limit between California Street and Pacific Avenue would be included in the zoning map amendment described above.

The provisions of the underlying use districts in the Planning Code would be superseded by the Special Use District provisions whenever there is conflict.

Scheduling/Procedures

Upon certification of the final EIR, the Planning Commission would consider adoption of both the Area Plan as a component of the Master Plan, the Special Use District as an amendment to the City Planning Code and Zoning Map, and the city-initiated rezoning as an amendment to the City Zoning Map. Once approved by the Commission, the Code and Map amendments would require

consideration by the Board of Supervisors and the Mayor. To adopt the Plan and rezoning, findings of consistency with the eight priority policies mandated by Proposition M, passed by the voters of San Francisco in November, 1986, would need to be made. These policies are intended to preserve neighborhood-serving retail uses; conserve existing housing and neighborhood character; preserve affordable housing; avoid overburdening transit, traffic, and neighborhood parking with commuter traffic; maintain a divere economic base; achieve the greatest possible earthquake preparedness; preserve landmarks and historic buildings; and protect sunlight access to and views from parks and open space.

Specific developments proposed after the Plan is adopted would undergo individual review through the appropriate required processes (conditional use, environmental evaluation, Proposition M findings, etc.). They would also be required to comply with Planning Code requirements pertaining to Van Ness Avenue. At such time, they would also be evaluated with respect to policies of the Van Ness Avenue Plan.

Methodology

This Environmental Impact Report covers general impacts of the area plan for Van Ness Avenue. For purposes of this analysis, those sites which are considered likely to be developed by the year 2000, so-called "soft sites," have been identified and their potential development quantified based on a standardized set of assumptions. This methodology is described in detail on pp. 57-59.

III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING SETTING

Land Use -

The Van Ness Avenue Plan study area reflects a mixed residential and commercial character with clusters of specific commercial or residential land uses interspersed throughout the length of the corridor. Generally, the area north of Broadway is characterized by small-scale apartment buildings and the area south of Broadway is characterized by one- to four-story commercial buildings with an occasional seven- or eight-story building interspersed. The exceptions to the area's moderate-scale development is the 25-story Holiday Inn at Pine and Van Ness; the 12-story Daniel Burnham Court at Post and Van Ness, and the 11-story 1700 California building at Van Ness Avenue.

At about 8.9 million square feet of gross building area, the study area's overall intensity of development reflects an average overall FAR of about 3 to 1 (3 square feet of building area for each square foot of land are). Commercial and residential space represent 56 and 35 percent of this development, respectively. This level of development is about 50 percent of the maximum allowable under existing zoning.

The 54-block study area has been divided into three subareas in the Plan. This EIR generally will review the potential impacts of all three subareas on a cumulative basis; the review will not be broken down into subareas. Descriptions of each of the three subareas are in the Plan and are summarized below.

Subarea 1 - McAllister Street to Broadway

The area from Golden Gate Avenue to Broadway is predominantly commercial with restaurant, hotel, personal and business service retail activities, auto sales and repair, gas stations, furniture and computer accessory stores and about 18 apartment buildings containing a total of about 1,275 dwelling

units. This area is currently zoned C-2 (Community Business) with an Automobile Special Use District overlay encompassing most of the subarea and allowing a 10:1 FAR. The current height limits allow a maximum of 130 feet for most of the area with the allowable height decreasing to 105 feet from Jackson Street to Pacific Avenue and to 80 feet from Pacific to Broadway. Few parcels have been developed to the maximum FAR nor have buildings been built to the maximum height; most of the buildings are two to four stories in height.

Existing zoning would allow a high residential density (one unit for every 200 square feet of lot are, or 1:200) between Redwood and Pine Streets and a medium to low residential density (1:400 to 1:800) between Pine Street and Broadway, depending upon the parcel's proximity to a residential district. The existing residential land uses in the subarea average a medium-high residential density (1:300).

Subarea 2 - Broadway to Bay Street

The area north of Broadway is predominantly residential with ground floor retail activities in some residential buildings interspersed with some wholly commercial buildings. Zoned C-2 with height limits decreasing from 80 to 40 feet toward the shoreline, the primary existing use is medium-density residential (averaging one unit for every 340 feet of lot area) with about 920 dwelling units in 24 buildings. Subarea 2 is distinct from the other subareas in that the intensity of street activity is noticeably lower and the sunlight exposure, quiet and shelter from winds is noticeably higher. Residential buildings are clustered with a number of mature trees lining the street, and retail activity is predominantly neighborhood-serving -- creating a sense of neighborhood and a residential identity and character for the area.

Subarea 3 - Bay Street to the Bay Shoreline

Subarea 3 extends from Bay Street to the San Francisco Bay shoreline. One block of the subarea is devoted entirely to public use (Galileo High School gymnasium and play field). The other block includes two 18-story residential apartment towers (the Fontana) zoned RM-4 (Residential Mixed, High Density)

and an office building (the Eastman Kodak Building)[1], zoned C-2. Portions of the area are under the jurisdiction of the Golden Gate National Recreation Area, including Fort Mason on the west side of Subarea 3. Residential use reflects a high density (1:200) level of development. The most striking resource of Subarea 3 is the public right-of-way which extends from the Van Ness Avenue/Bay Street intersection north to the Bay shoreline and the Municipal Pier. The visitor to this area is afforded a panoramic view, moving from a cityscape to the open Marin headlands. However, much of the wide concrete and asphalt right-of-way is devoted to parking (200+ spaces) which depreciates the area's open spaces and scenic vistas.

Zoning

Use Districts

The 54-block project area lies within several land use, height, bulk, floor area ratio, and residential density zoning districts. Although most of the project area is zoned for commercial use, two small areas are zoned for public use (P - Public Use District) and one small area is zoned for residential use (RM-3, District Residential, Mixed High Density). Figures 6 and 7 identify the area's existing zoning and height and bulk districts. The project area's commercial C-2 (Community Business) district allows a 3.6, 4.8 or 10 FAR, depending upon the parcel's proximity to a residential or high-density commercial district. The allowable residential density in a C-2 zoned parcel would range from low (1:800) to high density (1:200) depending upon the density of adjacent residential districts outside of the study area boundaries.

In addition to the basic C-2 zoning for Subarea 1, an Automotive Use District overlay (see Figure 6) allows certain auto sales and repair

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1 This building site is also included in the Northern Waterfront Plan study area, and that forthcoming Plan is expected to provide detailed recommendations concerning the site, as it is oriented more toward the Northern Waterfront area than the Van Ness Avenue area.

activities which would not otherwise be allowed in a C-2 district. The Automobile SUD allows a 10 to 1 FAR for properties lying within the district, which permits a substantially greater amount of development than the FAR limits that are in effect in the rest of the study area.

The Van Ness study area is adjacent to several areas included in the Neighborhood Commercial Rezoning Study (NCRS). NCRS interim zoning controls have been in effect since March 1985. The Polk Street Neighborhood Commercial District (NCD) controls, affecting an area east of and parallel to the Van Ness Plan area from McAllister to Filbert Street, limit new eating/drinking, financial service, and automotive uses. Floor Area Ratio (FAR) of new commercial development is 2.0 to 1. The Union Street NCD, located west of the Van Ness Plan area, features restrictions on bars, restaurants, cabarets, video arcades, banks and automotive-oriented uses, and a commercial FAR of 2.5 to 1. Also adjacent to the east side of the Plan area are two NC-3 (Moderate-Scale Neighborhood Commercial) districts, one along Lombard Street and one between Geary Boulevard and California Street. NC-3 controls are similar to C-2 (Community Business) district controls.

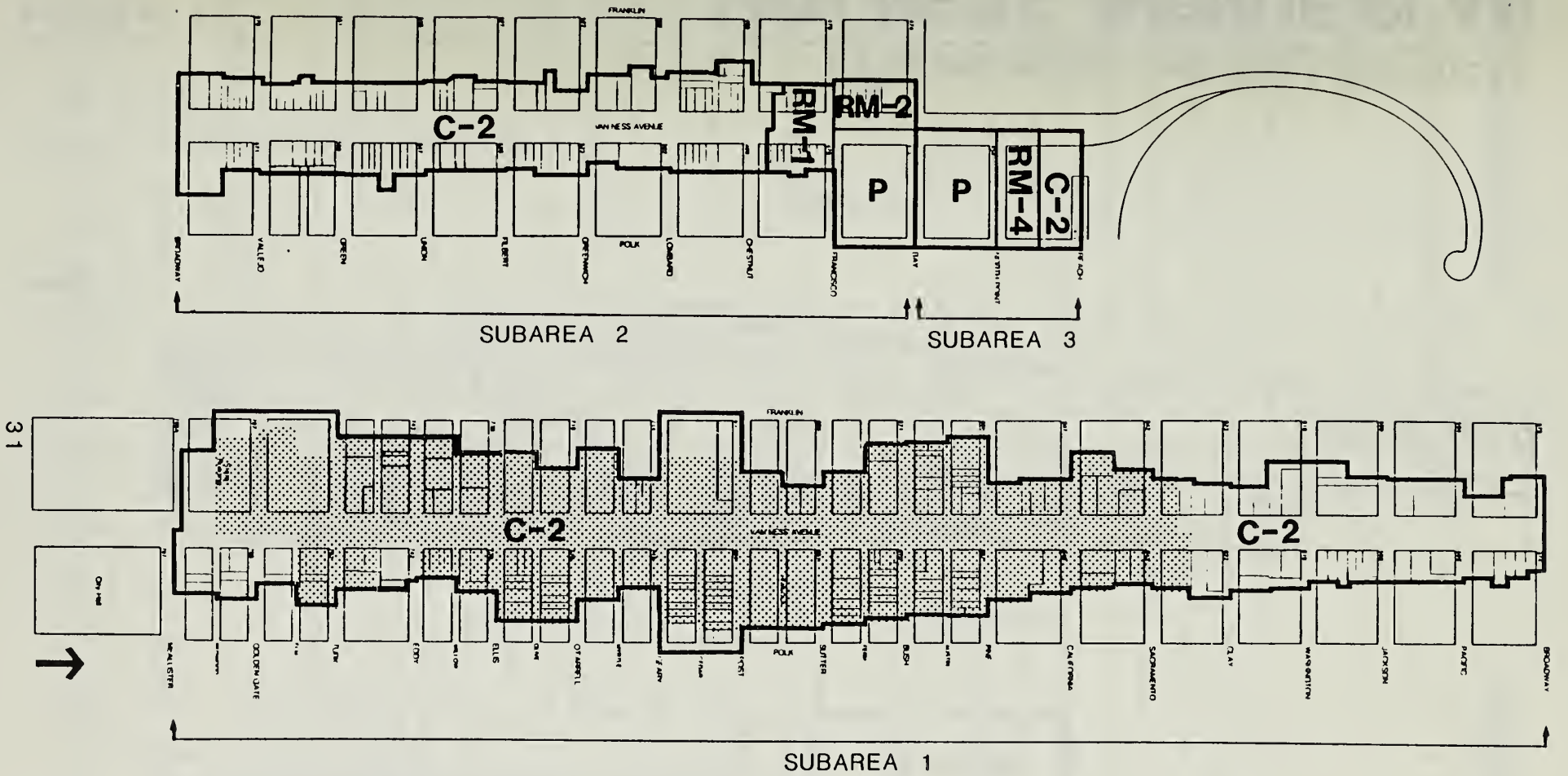
The west side of Van Ness Avenue from McAllister to Bush Street, including the sidewalk space on the east side of the avenue, lies within the San Francisco Redevelopment Agency's Western Addition A-2 Redevelopment Area. The A-2 Redevelopment Plan allows high density, general commercial activity for this area and includes high density residential development as a principal permitted use. Development proposals for properties lying within the Redevelopment Agency's jurisdiction would need to comply with the established A-2 Plan's requirements. Where there are conflicts between the proposed zoning and the requirements of the Redevelopment Plan, the Redevelopment Plan would prevail.

Height and Bulk Districts

Existing height district controls allow building forms that generally follow the natural contour of the land along the avenue's north-south axis. Height limits rise north of the Civic Center and peak at 130 feet within the

area from Redwood Street to Washington Street (see Figure 7). The natural elevation of the street rises at about a 2 percent average slope from 43 foot elevation at Market Street to 190 feet at Clay and Washington Street. From this point the land form elevation declines at about a 4 percent slope over a fourteen-block distance to sea level. The height limits continue to follow this contour, declining gradually from 130 feet to 40 feet at the shoreline.

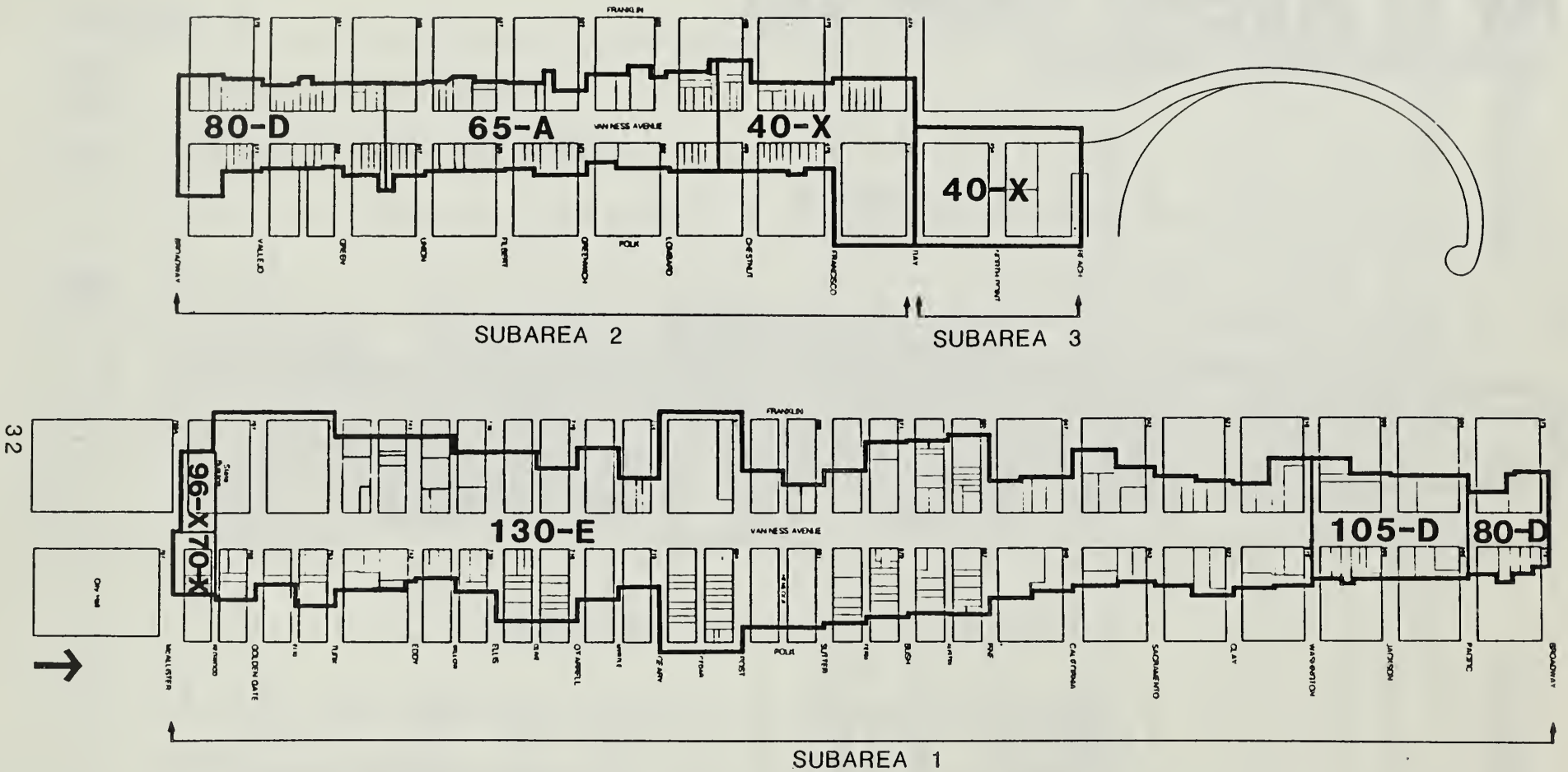
Existing "E" bulk controls allow building walls at street frontage up to 65 feet in height between Golden Gate Avenue and Washington Street. The bulk controls regulate the dimensions of buildings and as such do not explicitly require any setbacks; however, to the extent that the bulk controls begin to limit the size of buildings between 65 feet and the height limit, setbacks would occur. Similarly, from Washington to Lombard Streets, the "D" bulk limits could result in buildings with setbacks above the 40 foot height level. There are no bulk limits between Chestnut Street and the Bay shoreline, since the height limits restricts any development to 40 feet.



EXISTING ZONING DISTRICTS

FIGURE 6

VAN NESS AVENUE PLAN



EXISTING HEIGHT AND BULK DISTRICTS

FIGURE 7

VAN NESS AVENUE PLAN

B. VISUAL QUALITY AND URBAN DESIGN SETTING

Introduction

The elements that give Van Ness its visual definition and character include its natural landform, its streetspace and pedestrian amenities, view corridors and architectural resources. Pedestrian and streetscape views of Van Ness buildings, as well as the Bay and Russian and Nob Hills, give both an intimate and panoramic sense of open space and relief from the confinement of City streets. The unusually wide Avenue provides a sense of openness. In addition, there are about 35 architecturally significant buildings in the study area, which provide visual orientation, texture and intimacy and a sense of visual or aesthetic pleasure and relief to the street.

Skyline Image

Van Ness Avenue is an important element in the city's overall urban design framework. It has been identified in the Urban Design Element of the City's Master Plan as one of the streets most significant to the perception of the city pattern. As a major thoroughfare, it serves as an orientation point for city travelers. Its width serves as a natural edge to the city's northeastern quadrant bounded further by the shoreline and Market Street. Although the Avenue peaks at a 190-foot elevation on its north-south axis between Pine and Washington Streets, it also lies within a valley between the two 320-foot peaks of Lafayette Park and Nob Hill. Except for the 255-foot tall Holiday Inn and the 130-foot tall 1700 California building, most buildings between Pine and Washington along Van Ness are low. Building heights do not increase and decline as the avenue's elevation rises and falls toward the Bay shoreline; most buildings are low along the entire length of the avenue.

Streetscape and Pedestrian Amenities

The avenue's building heights are generally low and do not provide a strong building wall with which to frame the rather wide (125') avenue. A number of gas stations, parking lots and used car lots break up the continuity

of the avenue's building wall. Many of the buildings along Van Ness offer limited small-scale pedestrian-oriented retail activity. Portions of the avenue's median strip and sidewalk space north of Broadway feature mature trees which give texture to the street. Most of the avenue, however, is devoid of trees except for a nine block portion which was recently planted by the San Francisco Redevelopment Agency. Street furniture is sparse and bus stops are without benches. Streetlight circuitry, lamps, and poles are over 50 years old and are in need of repair and replacement.

The scarcity of properly-scaled building walls, street trees and furniture, and active, pedestrian-oriented retail activity, tends to allow the street activity, with its high traffic volumes, noise and pollution, to dominate the streetscape and diminish the quality of the pedestrian environment. However, there are amenities which do contribute to a pleasant pedestrian environment such as the area's pleasant microclimate, its view corridors and attractive buildings.

Architectural Resources

Older buildings with their richly textured materials, architectural style and decorative embellishments, not only provide a link with the past and create a sense of continuity and ownership, but also provide a richness of character, human scale and neighborhood identity. They help characterize many neighborhoods of the city and establish landmarks and focal points that contribute to the city pattern and areawide urban design.

Van Ness Avenue is endowed with a number of noteworthy older buildings. Their architectural style, scale and use of materials create a more intimate and interesting urban environment for the avenue (For more architectural background, also see Section III.C. Cultural and Historic Resources Setting).

C. CULTURAL AND HISTORIC RESOURCES SETTING

Van Ness Avenue in the 1890's was a residential boulevard with mansions sited on both sides of the wide, tree-lined avenue (for further detail, refer to the Van Ness Area Plan Proposal for Adoption). The majority of the Avenue's elegant mansions were destroyed in the fire and firebreak dynamiting following the 1906 earthquake. Some surviving mansions on the west side of Van Ness were converted into stores as Van Ness became one of two business districts formed to replace the burned-out downtown (Fillmore Street became the other).

Temporary commercial buildings were quickly constructed on the east side of Van Ness Avenue. The city's major department stores -- City of Paris, the White House, and the Emporium -- all located here, as did a number of banks including the Bank of California and the Anglo California Bank.

By 1909 the downtown was substantially rebuilt and Van Ness Avenue began to decline as a major commercial district as businesses began to relocate downtown. Auto showrooms quickly filled the void of these departing businesses. As early as 1904 a small number of auto showrooms and garages began to appear along Golden Gate Avenue between Hyde Street and Van Ness Avenue. After 1909, the clustering of the auto industry began along Van Ness Avenue.

A number of older buildings remain along the Avenue which are of noteworthy architectural style, detail, scale and use of materials. Seven surviving pre-fire, wood frame houses illustrate the architecture, materials, and detailing characteristic of the Victorian period. A number of the remaining auto showrooms and garages demonstrate the Beaux Arts era of commercial architecture. In addition to some notable apartment buildings along the avenue, some of the city's most noteworthy architecture is clustered around the Civic Center area. (Although the Civic Center area is not included in the Study area, it strongly defines the urban design and cultural resource character of Van Ness Avenue and is therefore included in appropriate discussions in this EIR). Overall, there are many unique and architecturally

attractive buildings which together create a special character and identity for the avenue.

The Van Ness Plan area encompasses two official city landmark buildings, the British Motors Showroom at 901 Van Ness and the Don Lee Building at 1000 Van Ness. In addition, there are 31 buildings in the Plan area which are rated in the Department of City Planning's 1976 survey of the city's architecturally significant buildings.[1] Ten of these structures have been given summary ratings of 3 or greater, and are therefore considered architecturally significant. In addition, a number of buildings within the study area have been rated by the Foundation for San Francisco's Architectural Heritage (Heritage) in a preliminary analysis of the Van Ness Avenue area. Heritage rated 47 buildings along Van Ness Avenue as architecturally and/or historically significant.[2] A total of 47 buildings within the study area have been identified as architecturally or historically significant by either the Department of City Planning or Heritage Foundation criteria.

NOTES - Cultural and Historic Resources

1 Between 1974 and 1976, the San Francisco Department of City Planning (DCP) conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the approximately 10,000 buildings which were entered in an unpublished 60-volume record of the inventory.

The inventory assessed the architectural significance of the surveyed buildings from the standpoints of overall design quality and particular design elements. Both contemporary and older buildings were included, but their historical importance was not considered. Each building was given a numerical rating that corresponded to its architectural significance. This rating included consideration of its urban design context and overall environmental significance. The ratings ranged from a low of "0" to a high of "5". The buildings were also given a separate classification based on their architectural style. The architectural survey resulted in a listing of approximately the best ten percent of San Francisco's buildings. In the estimation of the inventory participants, buildings rate "3" or higher represent approximately the best two percent of the city's architecture.

2 In 1982 and 1983, the Foundation for San Francisco's Architectural Heritage conducted a preliminary architectural and historic survey of the Van Ness study area which included the whole blocks on both sides of Van Ness from Market Street to the Bay shoreline. Preliminary summary ratings of A or B were assigned to the most significant buildings until further evaluation could better define the ratings. Based on the Heritage rating criteria, the summary ratings A or B indicate the following:

A. Highest Importance -- Individually the most important buildings in downtown San Francisco, distinguished by outstanding qualities of architecture, historical values, and relationship to the environment. All A-group buildings are eligible for the National Register and are considered to be of highest priority for City landmark status.

B. Major Importance -- Buildings which are of individual importance by virtue of architectural, historical and environmental criteria. These buildings tend to stand out for their overall quality rather than for any particular outstanding characteristics. B-group buildings are considered to be eligible for listing on the National Register.

D. POPULATION, HOUSING AND EMPLOYMENT SETTING

There are approximately 2,450 dwelling units within the Van Ness Avenue Plan study area. Based on 1980 Census information for the study area, there are approximately 3,600 residents, most of whom are renters (92%).

The average areawide household size is 1.45 persons per household (1980 Census data). Forty-seven percent of the population are one-person households. Twenty-two percent of the population are over the age of 65, five percent are under 18 years of age, and 23 percent are of Black, Asian or Spanish descent.

According to the 1980 Census, 18 percent of the households earned less than $5,000 per year; 37 percent earned from $5,000 to $15,000; 12 percent earned from $15,000 to $20,000; 13 percent earned from $20,000 to $30,000; and 20 percent earned more than $30,000 per year (all 1979 dollars). Thirty-two percent of the residents who work have administrative, professional or technical occupations; 32 percent hold sales or administrative support occupations; 14 percent hold personal service occupations; and 22 percent hold blue collar, manufacturing-oriented occupations (1980 Census data).

There are about 11,800 estimated employees working in office, retail, hotel, school, church, parking and government-related activities within the study area. Table 1 describes estimated employment, as well as resident population, within the study area.

TABLE 1: VAN NESS AVENUE PLAN STUDY AREA
EXISTING RESIDENT AND EMPLOYMENT POPULATION

EMPLOYMENT

Employment Type	Approx. Building Area (in sq.ft.	Density Ratio (Employees Per sq. ft.)	Estimated Employment
Office	956,400	1:275	3,478
Retail	2,148,000	1:350	6,137
Hotel	1,352,700	1:900	1,503
Parking	533,800	1:5,100	100
Public	258,700	1:1000	260
Auto Showrooms	569,200	1:1,865	305
Total Employment			11,783

RESIDENT POPULATION

No. Dwelling Units	Persons per Dwelling Unit	Total Population
2,460	1.45	3,567

Source: Department of City Planning; U.S. Census Bureau; and Environmental Science Associates.

E. TRANSPORTATION, CIRCULATION AND PARKING SETTING

Traffic

Van Ness Avenue runs north-south from Market Street to North Point Street, and approximately defines the western border of the area considered within the Downtown Transportation Plan of the San Francisco Master Plan. Van Ness Avenue serves as one of the major cross-town vehicle routes to and from the Golden Gate Bridge, and as such accommodates a great deal of "through" traffic as well as local trips. The street is designated as U.S. Route 101 from Golden Gate Avenue to Lombard Street, and connects with the regional freeway system within one or two blocks (at Golden Gate/Franklin, and Turk/Gough).

Van Ness is designated as a Primary Vehicular Street and Major Thoroughfare for its entire length,[1] with three through traffic lanes in each direction. Left turn movements are limited to intersections where an exclusive turn lane is provided within the median. Major thoroughfares are defined as "Cross-town thoroughfares whose primary function is to link districts within the City and to distribute traffic from and to the freeways..."[2] Primary Vehicular Streets, as defined in the Downtown Transportation Plan, function:... as major routes for automobile and truck movements into and out of the downtown area, chiefly to and from the parking belts for automobiles."[3]

Franklin (northbound) and Gough (southbound) streets operate as a one-way couplet paralleling Van Ness Avenue to the west. These two streets serve as "overflow", or supplemental, automobile routes, while through truck and bus traffic is restricted to Van Ness Avenue. Several important existing land uses on Van Ness generate heavy truck traffic, particularly automobile dealerships, concentrated primarily between O'Farrell and California Streets. Trucks account for about three percent of total daily vehicle volumes on the portion of Van Ness Avenue designated as U.S. Route 101. Local buses account for another three percent of total volume, and commuter or tourist buses comprise an additional two percent.[4]

Daily vehicle volumes on Van Ness Avenue range from about 17,000 to 27,000 vehicles in the northbound direction, and about 19,000 to 25,000 vehicles southbound.[4,5] Levels of service[6] on Van Ness Avenue in both directions average between D and F throughout most of the day between Civic Center and California Street; level of service C may be reached only for short durations within this segment.[7] A.M. and P.M. peak period level of service in both directions may be characterized at E to F throughout the corridor. North of California Street, midday level of service in both directions is generally in the C-to-D range.

Synchronized traffic signalization[8] exists at all cross streets of Van Ness Avenue except the midblock east-west alleyways between McAllister and Pine Streets. These intersecting cross streets are both local and arterial in nature, with some providing important links to freeway-based vehicle trips or serving citywide and regional commute travel. Table 2 (next page) provides a summary of street characteristics in the vicinity of the Plan area. A description of the street network is provided below:

Golden Gate Avenue provides access from the northbound U.S 101 freeway terminus at Franklin Street, and operates one-way eastbound. It is designated as U.S. 101 from Franklin to Van Ness, and as such carries major truck traffic. Three lanes are provided from Franklin to Van Ness, with a left-turn-only lane at Van Ness; left turns onto Van Ness are also permitted from the second lane, as well as through movements. From Van Ness to Market Street, Golden Gate Avenue operate with three eastbound lanes and parking on both sides, linking the Western Addition with the Civic Center area and downtown. In addition, it feeds onto Sixth Street, south of Market Street, which accesses Interstate Highway I-280. Some congestion occurs on Golden Gate Avenue between Franklin and Van Ness, particularly during the A.M. peak period.

Turk Street provides three lanes westbound during off-peak hours, with parking on both sides. During the P.M. peak period, two towaway lanes provide additional capacity for access from downtown and the Civic Center area to the U.S. 101 freeway on-ramp at Gough Street two blocks to the west of Van Ness Avenue, and through to the Western Addition neighborhood. Vehicle queueing

TABLE 2: VAN NESS AVENUE PROJECT AREA STREET CHARACTERISTICS

Street	Function	Lanes (+ peak period)	Direction	Classification[4]
Van Ness	Arterial	6	Two-way NS	PVS, TPS
Golden Gate	Fwy Acc	3	One-way E	PVS, TPS[5]
Turk	Fwy Acc	3(+2)	One-way W	PVS
Eddy	Local	2	Two-way EW	
Ellis	collector	3	One-way W	
O'Farrell	Arterial	2[3]	One-way E	TPS, PVS[6]
Geary	Arterial	2(+1)[3]	One-way W	TPS, PVS[6]
Post	Collector	2[3]	One-way E	TPS
Sutter	Arterial	2(+1)[3]	One-way W	TPS
Bush	Arterial	3(+1)	One-way E	PVS
Pine	Arterial	3(+1)	One-way W	PVS
California	Collector	4	Two-way EW	TPS[5], ST
Sacramento	Local	2	One-way W	TPS
Clay	Local	2	One-way E	TPS
Washington	Local	2	One-way E	
Jackson	Local	2	One-way W	
Pacific	Local	2	Two-way EW	SBR
Broadway	Arterial	4(+1)	Two-way EW	PVS, TPS[5]
Vallejo	Local	2	Two-way EW	
Green	Local	2	Two-way	EW
Union	Collector	3 east of Van Ness 2 west of Van Ness	Two-way EW	
Filbert	Local	1 east of Van Ness 2 west of Van Ness	One-way E Two-way EW	
Greenwich	Local	2	Two-way EW	
Lombard	Arterial[1]	2 east of Van Ness 6 west of Van Ness	Two-way EW	MT
Chestnut	Local	2	Two-way EW	
Francisco	Local	2	Two-way EW	SBL
Bay	Arterial[2]	4(+1)	Two-way EW	MT/ST[2], PCBR
Polk	Local	3	Two-way NS	TPS[7], PCBR
Franklin	Arterial	3(+1, +2)[8]	One-way N	PVS
Gough	Arterial	3(+1, +2)[8]	One-way (SP)[5]	PVS

TABLE 2 (Continued)

Key

Fwy Acc: Freeway Access Route
PVS : Primary Vehicular Street
TPS : Transit Preferential Street
ST : Secondary Thoroughfare
SBR : Signed Bicycle Route
MT : Major Thoroughfare
SBL : Signed Bicycle Lane (Class II)
PCBR : Preferred Commuter Bicycle Route

All the above street classifications are as defined in the Transportation Element (June 1982) of the San Francisco Master Plan.

NOTES TO TABLE

1 Lombard is an arterial west of Van Ness Avenue only; Lombard functions as a local street east of Van Ness.

2 Bay Street functions as a major arterial east of Van Ness Avenue and is classified in that portion as a Major Thoroughfare. West of Van Ness, Bay Street is classified as a Secondary Thoroughfare and functions as a minor arterial.

3 An additional diamond lane is provided, restricted to buses and right turns only, 7 A.M. 6 P.M.

4 Classifications as defined in the Vehicle Circulation Plan, Downtown Transportation Plan, or Bicycle Plan within the Transportation Element.

5 Transit Preferential Street east of Van Ness Avenue only.

6 Primary Vehicular Street west of Van Ness Avenue only.

7 Transit Preferential Street north of O'Farrell Street only.

8 Some portions of Franklin and Gough Streets have peak period towaway on both sides of the street, providing two additional traffic lanes. Peak period towaway restrictions do not extend north of California Street.

occurs during the P.M. peak period between Polk Street and the freeway on-ramp. Turk Street is designated as U.S. Route 101 from Van Ness Avenue to the freeway on-ramp, carrying major truck traffic for these two blocks.

Eddy Street is a local street in the vicinity of the project area, and operates two-way with parking on both sides.

Ellis Street serves as a distribution route from the downtown retail district, and operates one-way westbound through the project area with parking on both sides.

O'Farrell Street is an arterial commute street, operating 2 lanes one-way eastbound from Franklin Street to the downtown retail district, and an additional exclusive transit lane from Gough Street east, with parking on both sides. Some congestion occurs on O'Farrell Street in the A.M. peak period, due to commute traffic from the Richmond District to downtown.

Geary Street operates westbound with O'Farrell Street as the major one-way arterial couplet between downtown and the Richmond District. In the off-peak hours Geary provides two lanes for autos and a transit exclusive lane, with parking on both sides. In the P.M. peak period, towaway restrictions on both sides of the street provide an additional travel lane for commute vehicles and a wider transit lane for greater efficiency. Both Geary and O'Farrell Streets are designated as Transit Preferential Streets, and carry the Muni 38 lines, the most heavily patronized single bus line in the Bay Area. Congestion occurs on Geary Street in the P.M. peak commute period west of Gough Street, where Geary becomes a wider "parkway" arterial with some limited access.

Post Street provides access to the downtown retail district and edge of the financial district, with two lanes one-way eastbound and an additional transit exclusive lane, and parking on both sides. Some congestion occurs during the A.M. peak commute period.

Sutter Street is a major access route from the downtown core and retail districts. During off-peak hours, two lanes are westbound, with parking on both sides and an exclusive transit lane. During the P.M. peak period,

towaway lanes on both sides of the street provide an additional traffic lane and a wider transit lane for efficiency. Sutter Street experiences moderate congestion during the P.M. peak period in the vicinity of the project area.

Bush Street operates with Pine Street as the major arterial one-way couplet connecting Pacific Heights and the Richmond District with the project area directly with the financial district.

Both streets provide four traffic lanes in the peak commute periods (eastbound on Bush during the A.M. peak and westbound on Pine during the P.M. peak), and three lanes in off-peak periods. Both streets are characterized by heavy traffic volumes, with left turn movements from Van Ness Avenue permitted. Often, left turn queues from Van Ness to Bush Street extend beyond the exclusive left turn lane on Van Ness causing a major bottleneck, especially during the A.M. peak period.

California Street provides access to and from Nob Hill, Downtown, and Pacific Heights, with two lanes of traffic in both directions. The California Street cable car operates in the center of the street, in mixed traffic flow, and terminates at Van Ness Avenue. Parking is permitted on both sides of California Street, except in the vicinity of cable car loading areas.

Sacramento Street is a local street with two lanes one-way westbound and parking on both sides. Sacramento Street carries some commute traffic, but its capacity is limited west of Stockton Street because it has few signalized intersections; its main function is to distribute traffic west from Chinatown.

Clay Street is a local street in the vicinity of the project area, with two lanes one-way eastbound and parking on both sides. Both Sacramento and Clay Streets are designated as Transit Preferential Streets as far west as Gough Street, and carry the Muni 1-California trolley coach line.

Washington Street and Jackson Street operate as a one-way couplet connecting the project area with Chinatown and the Jackson Square Historic District. Each provides two lanes of traffic with parking on both sides. The Hyde Street Cable car operates on both streets three blocks east of Van Ness.

Pacific Avenue is a local street with two lanes, two-way operation and parking on both sides.

Broadway is a major arterial route connecting Pacific Heights, the Northeast Waterfront, North Beach areas and the Embarcadero Freeway. Two lanes are provided in each direction during most times of the day, with parking on both sides. During the P.M. peak period, a towaway lane provides an additional westbound traffic lane. Left turns are prohibited from Broadway to Van Ness in either direction during both the A.M. and P.M. peak periods, although southbound Van Ness Avenue traffic may make left turns onto eastbound Broadway at all times. The 30X, 30AX and 30BX Muni express lines operate on Broadway during peak commute periods, with Broadway designated as a Transit Preferential Street east of Van Ness Avenue.

Vallejo Street and Green Street are both local streets with two-way traffic and parking on both sides.

Union Street is a collector street in the vicinity of the project area. East of Van Ness Avenue, Union Street provides two westbound lanes and one eastbound lane, with parking on both sides, distributing traffic from North Beach and Russian Hill. West of Van Ness Avenue, Union Street has one lane in each direction with parking on both sides, and enters the Union Street neighborhood commercial district in the Cow Hollow district.

Filbert Street is a local street, providing one east-bound lane and 90-degree parking east of Van Ness Avenue. West of Van Ness Avenue, Filbert provides one lane in each direction and parking on both sides.

Greenwich Street is a local street, with one traffic lane in each direction and parking on both sides.

Lombard Street west of Van Ness Avenue is designated as U.S.Route 101, and serves as a major arterial and freeway access route to the Golden Gate Bridge. Northbound U.S. Route 101 traffic turns left from Van Ness Avenue at Lombard, with left turn movements permitted from two exclusive turn lanes. Three lanes are provided in each direction, with parking on both sides. East

of Van Ness Avenue, Lombard provides one lane in each direction and serves primarily as a local street, with the exception of the "crooked" stretch of the street between Hyde and Leavenworth Streets, which remains a major San Francisco tourist attraction.

Chestnut and Francisco Streets are local streets, with one traffic lane in each direction and parking on both sides.

Bay Street is a major arterial, connecting the Northeast Waterfront and Fisherman's Wharf with the Marina District and routes to the Golden Gate Bridge. Two lanes are provided in each direction during off-peak hours, with parking on both sides. During the P.M. peak period, a towaway lane provides an additional traffic lane. Bay Street is the northernmost intersecting street with Van Ness Avenue providing through travel, and two lanes are permitted to turn onto westbound Bay Street from northbound Van Ness. Bay Street experiences congestion during both the A.M. and P.M. commute periods.

Polk Street parallels Van Ness Avenue one block east, and provides two lanes southbound and one lane northbound, with parking on both sides. Polk Street serves to distribute some traffic from Fisherman's Wharf southbound, although capacity is severely limited through its commercial district. Polk Street experiences moderate to heavy congestion throughout the day.

Franklin Street parallels Van Ness Avenue one block to the west and operates with Gough Street as a one-way arterial couplet from Market Street to California Street. As the last street where left turns are permitted from inbound Market Street to North-of-Market Street destinations, Franklin Street is characterized by heavy traffic volumes. The U.S. 101 freeway terminates northbound at Franklin and Golden Gate Avenue, with much of its auto traffic continuing on Franklin Street. Franklin Street experiences frequent moderate congestion from Market Street to California Street throughout the day. The street experiences heavy congestion during both the A.M. and P.M. peak periods, despite the provision of one or two additional traffic lanes. North of California Street, both Franklin and Gough Streets function more as collector streets than major arterials, although at least three traffic lanes are provided at all times on Franklin Street.

Parking

There are presently about 660 on-street parking spaces[9] along Van Ness Avenue and on intersecting cross streets west of Van Ness Avenue adjacent to commercial properties fronting on Van Ness Avenue; there are about 840 additional parking spaces[9,10] along the remaining frontage of these cross streets as far to the west as Franklin Street and on the blocks between Van Ness Avenue and Polk Street, for a total of about 1,500 spaces. From Golden Gate Avenue to Sacramento Street, nearly all spaces adjacent to commercial frontage are metered. Most meters allow 1-hour parking, with limited numbers of 2-hour and 30-minute meters. North of Sacramento Street, on-street parking within the project area is generally regulated by residential permit parking restrictions (A, G and K stickers) and limited for nonresident permit holders to a maximum of two hours. Unregulated parking is extremely limited. On-street parking is generally occupied at or above[11] capacity.

About 1,180 off-street parking spaces are available to the public within the immediate Van Ness Avenue Plan area, with an average occupancy of about 51 percent.[9,12] Some of these spaces are made available at discounted rates for movie theater patrons. An additional 920 off-street spaces are provided in the project area that are restricted for customer or employee use.

Transit

The project area is served well by both Muni and Golden Gate Transit, and is designated as a Transit Preferential Street for its entire length. Three Muni crosstown lines (42, 47 and 49) traverse the length of Van Ness Avenue, and several others operate on a portion of the street. Eighteen other Muni bus lines cross Van Ness in the project area, mostly radial lines serving downtown. In addition, all five Muni Metro lines service the Van Ness Metro Station at Market Street. The California Street cable car line terminates at Van Ness Avenue.

Regional transit service serving the project area is provided by Golden Gate transit, operating on Van Ness from McAllister to Lombard Streets; by BART, which services the Civic Center Station a few blocks to the southeast;

and by SamTrans, which serves the adjacent Civic Center area.

Pedestrian

Within the project area, there is currently moderate pedestrian activity. For the most part, this activity is generally accessory to on-street visitor and customer parking. Moderate amounts of pedestrian congestion occur in the vicinity of Sutter Street, although limited to pedestrian queues at two major movie theaters during peak performance times of popular shows.

Notes - Transportation

1 Element of the San Francisco Master Plan (June 1982), pp. 27 and 47.

2 Ibid., p. 24.

3 Ibid., p. 48.

4 Department of Public Works, 1983 Cordon Count.

5 Department of Public Works, 1982 Traffic Counts.

6 Level of Service designations used are for arterial segments over the length of the project area, rather than individual intersections. Refer to Appendix I for discussion of Level of Service calculations and description of designations.

7 Department of Public Works and Department of City Planning, 1983 field checks, speed and delay calculations.

8 Traffic signalization is synchronized to facilitate peak period vehicular flow, favoring the east-west cross streets. These signals are connected into a phasing system; greet-light phasing is "synchronized" progressively to permit maximum vehicular flow with minimum delay.

9 Department of City Planning. Neighborhood Parking Plan, 1986-1990, April 1986.

10 Ibid.; and Department of City Planning field surveys, February 1983.

11 Parking spaces occupied above capacity reflect a situation in which more cars are actually parked than exist legal spaces; i.e., cars are parked illegally.

12 Neighborhood Parking Plan, 1986-1990; Telephone verification for garages in Holiday Inn, Cathederal Hill Hotel, and Opera Plaza, June 1986.

F. AIR QUALITY AND CLIMATE SETTING

AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O), carbon monoxide (CO), total suspended particulates (TSP), lead (Pb), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). On the basis of the monitoring data, the Bay Area, including San Francisco, currently is designated a non-attainment area with respect to the federal ozone and CO standards. A three-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about 2.3 miles south at 900 23rd St.) is shown in Appendix II, together with the corresponding federal and/or state ambient air quality standards. In 1986, there were no violations of the federal ozone standard, two violations of the federal and state eight-hour CO standards, and one violation of the federal TSP standard. In 1985, there were no violations of the federal ozone standard, three violations of the federal and state eight-hour CO standards, and no violation of the federal TSP standard. In 1984, there was one violation of the state ozone standard, one violation of the federal and state eight-hour CO standards and five violations of the previous state 24-hour average TSP standard.[1]

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Prevailing west, west-northwest, and northwest winds blowing off the Pacific Ocean reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

BAAQMD has conducted two CO "hot-spot" monitoring programs in the Bay Area, including San Francisco. One CO monitoring program was conducted during the winter of 1979-80 at the intersection of Washington and Battery Streets in San Francisco.[2] The high eight-hour average concentration was 10.1 ppm, which violates the 9-ppm state and federal standards by 1.1 ppm. The high one-hour average concentration of 15 ppm does not violate the 20-ppm state standard or the 35-ppm federal standard. Another CO monitoring program was conducted

during the winter of 1980-81 and included the San Francisco intersection of Geary and Taylor Streets, and at 100 Harrison Street at Spear.[3] At Geary and Taylor the observed high eight-hour average concentration was 11.5 ppm, which violates the standards by 2.5 ppm, and the high one-hour concentration was 15 ppm, which does not violate standards. At Harrison St. the observed high eight-hour and one-hour average concentrations were 7.8 ppm and 13 ppm, respectively, which do not violate standards. In December 1985, the city monitored CO and counted traffic at the Sixth and Brannan intersection. These data from the "hot-spot" monitoring programs indicate that locations in San Francisco near streets with high traffic volumes and congested traffic flows may experience violations of the eight-hour CO standard during adverse meteorological conditions.

San Francisco's air quality problems, primarily CO and TSP, are due largely to pollutant emissions from within the City. CO is a non-reactive pollutant and its major source category is motor vehicles. CO concentrations generally are highest during periods of peak traffic congestion. TSP levels are relatively low near the coast, increase with distance inland, and peak in dry, sheltered valleys. The primary sources of TSP in San Francisco are demolition and construction activities, and motor vehicle travel over paved roads.

San Francisco contributes to regional air quality problems, including ozone, which affects other parts of the Bay Area. Ozone is not emitted directly from sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbon (HC) and nitrogen oxide (NOx) emissions, which are carried downwind as the photochemical reaction occurs. Ozone standards are exceeded most often near San Jose and in the Livermore Valley, because their local topography and meteorological conditions favor the build up of ozone and its precursors.

In 1982, motor vehicles were the source of 86% of the CO, 46% of the HC, 44% of the TSP, and 56% of the NOx emitted in San Francisco, while power plant fuel combustion was the largest single source of sulfur oxides (SOx), about

33% of the total.[4] These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO non-attainment designations, the Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the 1982 Bay Area Air Quality Plan, which establishes pollution control strategies to attain the federal ozone and CO standards by 1987 as required by federal law.[5] These strategies were developed on the basis of detailed subregional emission inventories and projections, and mathematical models of pollutant behavior, and consist of stationary and mobile source emission controls and transportation improvements. The BAAQMD, MTC, Air Resources Board, Caltrans, and California Bureau of Automotive Repair (a state agency), and the U.S. Environmental Protection Agency each have specific responsibilities for implementation of the various strategies.

CLIMATE

San Francisco has a relatively moderate climate with temperatures rarely exceeding 90 degrees Fahrenheit or dropping below freezing. The average daily maximum and minimum are 62.4 and 50.9 degrees, respectively, with the warmest and coldest months being September and January. Fog and low cloud cover are characteristic of San Francisco along with gentle breezes, particularly during the summer months (May through September). Wind frequencies and speeds are lower during the spring, fall and winter months. The mean windspeed during the spring, fall and winter months. The mean windspeed during the summer is 8 miles per hour (mph) while in winter it is 4.8 mph and spring and fall is 6 mph. A number of variables influence pedestrian thermal comfort levels including temperature, humidity, clothing, level of activity, windspeeds and presence or absence of direct sunlight. Physical effects that cause pedestrian discomfort are wind-blown dust, the blowing of hair and flapping of clothes, and interference with contact lenses. These physical effects all begin to occur at a windspeed of about 11 mph.

NOTES - Air Quality

1 State standards for particulate matter changed in 1983 and federal standards changed in 1987 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled (PM-10). The previous state and federal particulate standards were 100 micrograms per cubic meter (ug/m^3) and 260 ug/m^3 of particulates, respectively. The present state and federal PM-10 standards are 50 ug/m^3 and 150 ug/m^3, respectively, of fine particulate matter. Although both the previous and present particulate standards are measured in ug/m^3, under the PM-10 standards only those particulates 10 microns or less in size are measured. The BAAQMD (Thomas Perardi) has stated that TSP includes about 50-60% of particulates of 10 microns or less; thus, the TSP standards are generally equivalent to the PM-10 standards. BAAQMD is presently monitoring PM-10 at seven Bay Area monitoring stations, including the 16th and Arkansas station in San Francisco. Data from the San Francisco station from April 1986 to September 1986 are available. Once 12 months of data are available it will be possible to assess whether specific violations of the PM-10 standard have occurred.

2 Association of Bay Area Governments (ABAG), AQMP Tech Memo 33, "Summary of 1979/1980 CO Hot-spot Monitoring Program," Berkeley, California, June 1980.

3 ABAG, AQMP Tech Memo 40, "Results of the 1980/1981 Hot-spot Monitoring Program for Carbon Monoxide," Berkeley, California, January 1982.

4 Bay Area Air Quality Management District (BAAQMD), "Base Year 1982 Emissions Inventory, Summary Report," San Francisco, California, November 1, 1982.

5 ABAG, BAAQMD and MTC, 1982 Bay Area Air Quality Plan, Berkeley, California, December 1982.

G. NOISE

The noise environment is dominated by vehicular noise levels associated with the Avenue's function as a major thoroughfare and a state highway. The Environmental Protection Element of the San Francisco Master Plan indicates a day-night average noise level (L_{dn}) of 80 dba along Van Ness from Market to Lombard Streets in 1974.[1] According to the plan, this is considered a loud noise environment for residences, transient lodging, and most commercial activities, and new construction or development is discouraged unless a detailed analysis of noise reduction requirements is made and recommended noise insulation features are included in the project design.[2]

NOTES - Noise

1 City of San Francisco, Comprehensive Plan, Environmental Protection Element, page 17.

2 Ibid., page 19.

H. GEOLOGIC/SEISMIC SETTING

While there are no active faults within the City of San Francisco, there are several located nearby, which could affect existing and future development. They include the San Andreas Fault, just west of San Francisco, and the Hayward and Calaveras Faults located in the East Bay.

Most of the Van Ness Avenue study area is underlain by dune sand, which provides moderate to high earthquake stability. A four-block area from Union to Chestnut Streets is underlain by undifferentiated Quaternary deposits, including Coloma formation of unconsolidated sand and clay, alluvium, slope debris, and bay mud, providing earthquake stability ranging from low to moderate. A three-block area between Broadway and Green Street is underlain by artificial fill, which exhibits very low earthquake stability where placed over soft bay mud. Given this soil distribution, the only known geologic hazard in the study area associated with earthquakes is ground shaking.

According to the Community Safety Element of the San Francisco Master Plan, the study area would generally experience "strong" (between Geary Boulevard and Broadway) to "very strong" ground shaking (north of Green Street and south of Geary Boulevard) in the event of an earthquake similar to the 1906 event in San Francisco. A relatively small area between Broadway and Green Streets lying predominately west of Van Ness Avenue would experience "violent" ground shaking. Areas of "strong" ground shaking are characterized by general but not universal fall of brick chimneys and cracks in masonry and brick work. Buildings in areas of "very strong" ground shaking would be likely to exhibit badly cracked masonry with occasional collapse, and lurching of frame buildings when on weak underpinning with occasional collapse. In areas of "violent" ground shaking, fairly general collapse of brick and frame structures can be expected, unless the buildings are unusually strong, as well as serious cracking of stronger buildings and lateral displacement of streets, bending of rails, and ground fissuring.[1]

Unreinforced brick structures built before 1948 (when the City's first seismic safety requirements were incorporated into the Building Code) would be

most susceptible to heavy damage or collapse during an earthquake. Properly founded steel-framed buildings constructed to the seismic safety specifications of the San Francisco Building Code would suffer the least damage due to ground shaking. Building Code specifications prior to 1984 were intended to ensure that buildings conforming to its standards will not collapse in an earthquake of magnitude 7-8 on the Richter Scale, depending on building type and location. Responses of buildings designed to these standards to an earthquake of magnitude 8.0 or greater is not known.

Ground shaking from earthquakes similar to or smaller than the 1906 event (Richter magnitude 5.5 or greater) could topple unattached interior objects such as bookcases and furniture, and break or dislodge some windows, exterior panels, or cornices. Toppling interior objects could injure residents or workers inside existing buildings; falling windows and facade material would be a hazard to pedestrians and vehicular traffic. Potential danger from aftershocks could cause the City to order some buildings or categories of buildings to be vacated until preliminary assessments of damage and vulnerability to aftershocks can be made by engineers.

A full description of potential effects and emergency response systems associated with a major earthquake are contained in the Downtown Plan EIR (pp. IV.K.5a to K.9), which is incorporated herein by reference. In general, it can be expected that communication and emergency access to individuals, and travel to and from the City, could be delayed for up to three days. San Francisco maintains an Office of Emergency Services which is charged with developing and coordinating the implementation of an Emergency Operation Plan and emergency response plans for specific areas or buildings in case of a disaster in the City. The Emergency Operation Plan contains an Earthquake Response Element, which establishes a system of care facilities and communications network.

NOTES - GEOLOGIC/SEISMIC SETTING

1 Groundshaking in San Francisco has been classified in the Community Safety Element on a five-point scale ranging from A (very violent) through E (weak), based on the amount of damage that would be caused by groundshaking in an earthquake with a Richter magnitude of 8.3.

IV. ENVIRONMENTAL IMPACTS

A. LAND USE IMPACTS

INTRODUCTION

The Van Ness Avenue Plan is proposed for adoption by the City Planning Commission as an Element of the City's Master Plan. The Plan would be implemented through (1) rezoning all properties located in Subarea 1 to RC-4 (Residential-Commercial Combined, High Density), and amending the Planning Code to establish a Special Use District (SUD) for Subarea 1 (McAllister Street to Broadway) and (2) rezoning all properties located in Subarea 2 (Broadway to Bay Street) now zoned C-2 (Community Business) to RC-3 (Residential-Commercial Combined, Medium Density). The Plan's policies for Subarea 3 are largely advisory and do not necessitate amendments to the Planning Code or Zoning Map. The Van Ness Avenue SUD controls are proposed for adoption by the Planning Commission and the Board of Supervisors as text and map amendments to the City Planning Code, as is the rezoning of Subarea 2. Once adopted, the Plan policies and zoning controls would affect new construction and conversion of uses within existing structures lying within the SUD and Subarea 2 boundaries.

Existing legal uses not conforming to the new land use controls would take on the status of non-conforming uses and would be allowed to remain in their present location, size, and density until the use is voluntarily converted to a conforming use or until the building is demolished. Non-conforming uses could change ownership and could change types of non-conforming uses so long as the new (still non-conforming) use were first permitted in a C-2 district, subject to the provisions of Article 1.7, Section 182(b) of the City Planning Code. Non-conforming uses could only be expanded up to 20% of their original floor area. Any expansion of space beyond 20% within a structure occupied by non-conforming uses would have to conform to the Special Use District controls; any additional space would be required to fulfill applicable housing requirements and ratios.

METHODOLOGY

Based on past trends and discussions with area property owners, it is expected that a number of existing wholly commercial buildings would be retained within Subareas 1 and 2 because the proposed zoning controls would generally be more restrictive by requiring new housing. These existing buildings are generally large and contain businesses which maintain strong economic activity (e.g. Cathedral Hill Hotel, Holiday Inn, Regency Theater) and, based on past and projected economic trends, are not expected to be demolished for new construction or converted to another use.

In addition, a number of churches, apartment buildings and public buildings are large, occupy more than 60 percent of the site's allowable building envelope under both existing and proposed controls, and maintain strong economic activity or high public use. The 60 percent threshold was derived from a cash flow analysis on a number of representative sites. This analysis was used to compare the cash flow of existing development with that theoretically possible if the same sites were developed under the proposed Van Ness Area Plan controls. Included in this analysis were demolition costs and an assumption of a 10% vacancy rate for all uses. The results of this analysis were discussed with property owners, developers, architects and brokers. There was a consensus among all participants of this analysis that demolition and redevelopment of a site currently occupied by a building exceeding 60 percent of the allowable building area would not be economical. These sites were thus considered "hard sites" and not likely to be demolished or converted to another use.

Properties with structures constituting less than 60 percent of the site's allowable building area and which house low-intensity commercial activities (showrooms, restaurants, motels) are considered "soft sites" which could be vulnerable to demolition for new construction.

Very few areas in the city are developed to the maximum density or to the full buildout allowed under the area's respective zoning controls. The Van Ness Avenue area is developed at about 50 percent of what would be allowed

under existing zoning controls at full buildout. The Van Ness Avenue Plan is intended to result in an attractive investment environment. For the purposes of providing an analysis that ensures an evaluation of full potential impact, this analysis will assume full buildout of all soft sites. Some of the parcels adjacent to each other were assumed to be assembled into development sites; those parcels where the owners are known to have repeatedly refused to sell or joint venture to create an assembled site were not classified as assembled development sites but treated as individual sites instead. Each site was developed to the maximum building envelope allowed under the proposed controls.

The development projections derived from these assumptions represent the development potential until the year 2000. An analysis beyond this timeframe would be less reliable; all projections contained in this analysis have been derived under the condition that it is likely that development could occur before the year 2000.

However, it should be cautioned that due to the many factors which operate in conjunction with zoning to establish development feasibility, not all identified soft sites will necessarily be developed within the indicated timeframe. Many of these factors have equal, or greater, influence on development decisions than zoning. These variables include the cost of land, demolition, and construction; cost of money (interest); cost of permits (Building Code, Police, Fire, Health); and most importantly, market demand for the development. These factors are in constant flux and it is not possible to predict with certainty which lots in any given district would develop to the maximum envelope. In addition, the constitutional guarantee of equal protection requires that zoning regulations apply uniformly to all properties in a district. The uncertainties noted above and this legal requirement usually result in zoning controls which have a district-wide permitted building envelope that exceeds planning goals and market feasibility.

Because of the factors discussed in the preceding paragraphs, it is unlikely that Van Ness Avenue would develop to the full potential permitted under the proposed Plan in the foreseeable future. The amount of development

assumed in the analysis used for this EIR (considerably less than maximum potential) may not be achieved until after the year 2000. However, the latter amount is considered to be a reasonable maximum in a reasonable timeframe for purposes of environmental review.

Within the length of the Van Ness study area, approximately 50 parcels, currently encompassing approximately 500,000 square feet of land area and 1 million square feet of building area, are considered soft sites; it has been assumed for the purposes of this analysis that these parcels have been assembled into 27 development sites.

About 11 percent of the parcels in the study area (32 buildings encompassing 1.3 MSF of building area) are occupied by buildings which are likely to be identified by the Plan as architecturally significant and be recommended for preservation. For purposes of analysis in this report, these 32 buildings will be assumed retained either in residential use (in the case of existing apartment buildings) or in office use.

For the purpose of determining the anticipated residential density, a range of unit sizes, based on what is considered marketable as either rental or condominium units, was used. A minimum 500 square feet (studio), an average 800 sq. ft. (1-bedroom), and an outer limit of 1,500 sq. ft. (3-bedroom) per dwelling unit was assumed.

IMPACTS

Table 3, next page, presents existing and estimated year 2000 development in the Van Ness Avenue Plan area under the Plan. Full development of 50 parcels (assembled into 27 development sites) and conversion of existing significant buildings to retail/office use could result in about 2.7 MSF of new building area, including approximately 690,000 square feet of commercial space and 2.0 MSF of residential space. In addition, about 420,000 square feet of auto showroom space could be converted to more intensive retail or office uses. Offsetting this new development would be the loss of about 960,000 of existing commercial space and 41,000 square feet of residential

TABLE 3: EXISTING AND ESTIMATED (2000) DEVELOPMENT
IN VAN NESS AVENUE PLAN AREA UNDER VAN NESS AVENUE PLAN

All Numbers are in Gross Square Feet
Except (DU = Dwelling Units)

	Retail	Office	Hotels	Auto Showrooms	Total Commercial[a]	Residential
Est. New Development (New Construction)	+525,600	+167,300	0	0	+ 692,900	+2,028,000 (2189 DU)
Estimated Auto Showroom Conversions	+104,200	+312,000		-416,200	0	
Existing Uses Estimated to be Redeveloped (Uses on "Soft Sites")	-732,000[b]	- 96,600	-132,700	0	- 961,300	- 41,000 (24 DU)
Net New Development	-102,200	+382,700	-132,700	-416,200	- 268,400	+1,987,000 (2165 DU)
Existing Uses Estimated to Remain (Uses on "Hard Sites")	1,569,000	859,800	1,220,000	0	3,648,800	3,059,000 (2436 DU)
Total Estimated Development by 2000	1,569,000	1,242,500	1,220,000	0	4,031,500	5,046,000 (4601 DU)

[a] Sum of retail, office, hotel, and auto showrooms

[b] Includes 153,000 sq. ft. of automobile dealerships (non-significant buildings)

space on sites to be redeveloped or converted to more intensive uses. Thus, a net loss of about 270,000 square feet of commercial space and a net gain of about 2,000,000 square feet of residential space could occur under the Plan. The net new development, added to existing buildings, would result in a cumulative total areawide development of 9.9 MSF, exclusive of existing parking and public buildings. This represents an areawide increase in intensity of development of about 1 FAR. Assuming full buildout of all soft sites, approximately 2,150 new dwelling units could be constructed. Added to the number of existing units, this would result in a cumulative total of about 4,600 units in the Van Ness Plan area, representing a 90 percent increase.

Subarea 1 -- Golden Gate Avenue to Broadway. This subarea would be expected to experience the greatest amount of new development of all three subareas. The mix of uses, however, is not expected to change substantially from the present mix of residential and various commercial activities. The greatest change would be the addition of a substantial amount of housing along the Avenue within mixed use developments. There are presently about 1,275 dwelling units in mixed use (ground floor retail, residential above) developments within the subarea, reflecting an average residential density of one unit per 300 sq. ft. of lot area (1:300). Generally, 1:200 is considered high density housing while 1:400 is considered medium density, and 1:800 is considered low density.

Due to anticipated increases in rental rates in new developments, as well as current trends in the local automobile sales and service industry, it is expected that some large space users such as vehicle showroom and service activities and furniture showrooms would relocate to other areas of the city. A number of auto sales and service areas have recently relocated to the South of Market/Mission/Potrero (AutoCenter) area while furniture showrooms are beginning to concentrate in the Showplace Square(Townsend/16th/Henry Adams St.) area.

Under the proposed controls, up to 32 parcels (assembled into 15 development sites) could be developed and six auto showroom buildings could be

converted into a combined maximum of 486,400 sq. ft. of retail space, 479,300 sq.ft. of office space and up to 1.53 MSF of residential space. Added to the existing level of development in the subarea, the resulting cumulative subarea development could total as much as 7.6 MSF of building area. The major change would be a substantial (240 percent) increase in the amount of residential space, assuming full buildout of all potential soft sites.

New development under the SUD controls for this subarea would be expected to increase the number of dwelling units by about 1,820 units (at an average 800 sq. ft./unit) or would range from about 1,020 (at 1,500 sq. ft./unit) to about 3,060 (at 500 sq. ft./unit) units. It is not expected that the city's market for studio apartments or condominiums is strong enough to consume the number of small units which could theoretically be accommodated along Van Ness Avenue, nor is it expected that the market for higher-priced larger units sited along a major thoroughfare is large enough to consume the number of larger units which could be accommodated along the Avenue. Therefore, it is expected that the middle range 800 sq. ft. (1 or 2-bedroom) unit would be the type of unit most likely to fit the anticipated Van Ness Avenue housing market. If so, this would result in an average high density (1:290) for the subarea which would be slightly lower than what presently exists within the subarea (1:300).

Proposed floor area ratio limits would usually be achieved before height limits are reached. Under the proposed controls, FAR limits would apply to dwellings as well as commercial floor area. Residential density limits would be based on building volume rather than a specification of the number of dwelling units allowed per increment of lot area. Determination of the permitted number, size, and mix of housing units within each development would be part of the conditional use review. Under the proposed controls, mixed use development would be expected to be built to the maximum allowable building envelope.

New development would take place on soft sites which are presently occupied by one or two-story buildings housing small retail, personal service

or automobile-related retail activities. In most cases the amount of retail space would be replaced or expanded in the new development, since the proposed controls would require pedestrian-oriented ground floor retail space along the Van Ness frontage in new developments.

Subarea 2 -- Broadway to Bay Street. Under the proposed RC-3 zoning controls, Subarea Two would continue to maintain a mixed use, predominantly residential character. Since the proposed controls would regulate non-residential uses more stringently than existing C-2 controls, it is expected that most of the existing residential buildings would not be demolished. Under Section 206.3 of the Planning Code, an expressed purpose of RC districts is to maintain residential buildings containing neighborhood-serving commercial activities. Generally, non-residential uses in RC-3 districts have been limited to the ground floor and second stories of such buildings, with the second story requiring conditional use authorization. Two of the ten significant buildings contain residential units exclusively.

A number of structures, presently zoned for commercial use, have already been converted to wholly commercial use. These buildings would be expected to remain under the proposed controls. Existing commercial activity above the ground floor would be classified as a non-conforming use and would be treated as described in the introduction to this section.

New development would likely consist of medium-density (approximately one dwelling unit per 400 square feet of lot area) housing above ground floor commercial activity. Up to 18 parcels, assembled into about 12 development sites, could be developed into about 143,400 sq. ft. of commercial space, and up to 496,000 sq. ft. of residential space (365 dwelling units). The major change in development under the proposed controls would be an approximate 30 percent increase in the amount of residential space within the subarea, assuming full buildout of all potential soft sites.

Subarea 3 -- Bay Street to the Bay Shoreline. Subarea Three would remain in its present zoning. Due to the presence of Galileo High School and the Fontana residential towers on the east side, and Fort Mason and open space

protected by the Golden Gate National Recreation Area (GGNRA) to the west and north, there is no significant change in land use expected. The Van Ness Area Plan recognizes Subarea Three as the important link between the more active stretch of the Avenue and the Bayshore's scenic views and open space. To enhance this connection, the Plan encourages a uniform landscaping plan and active pedestrian areas in the subarea. In addition, the Plan includes a policy to lend further support to the GGNRA and its specific policies for improvement to the Municipal Pier area at the foot of Van Ness Avenue.

B. VISUAL QUALITY AND URBAN DESIGN IMPACTS

Proposed land use changes for the Van Ness Corridor would create changes in the scale and character of buildings on the street, especially in Subarea 1 (Golden Gate Avenue to Broadway). The plan envisions a streetscape of tapered mid-rise structures up to an overall maximum height of 130 feet between McAllister and California Streets and 80 feet between California and Pacific Streets.

To a lesser extent, similar changes could occur on soft sites in Subarea 2, where maximum heights of 65 and 80 feet would be permitted. There would be no change in scale in Subarea 3. Buildings exceeding a height of 40 feet in either Subareas 1 or 2 would require conditional use authorization. Such buildings could be required to incorporate setbacks above the 40 foot base whereupon that upper portion of the building would be restricted to a maximum length of 110 feet and a maximum diagonal dimension of 140 feet in order to be consistent with the Urban Design guidelines set forth in the Plan. The Plan's design policies require consideration of the following standards:

1. Buildings should conform with the natural and built forms along the Van Ness Corridor: A gradual increase in building height between the Civic Center and California Street and a decrease in height north of California Street to the Bay.

2. Van Ness Avenue should be defined by a consistent street wall on both sides. New buildings should contribute towards creating a steady building wall, incorporating setbacks as necessary above 40 feet in height. Certain variations in height and setbacks would be encouraged to avoid a "benching effect" on Van Ness Avenue.

3. In the design of new buildings, the Plan includes policies encouraging the retention of, and harmonizing new development with, several buildings identified in the Plan for their architectural and/or cultural merit. (For a detailed discussion of these

significant buildings, see Section IV.C., Cultural and Historic Resources Impacts).

4. For those buildings featuring more than one mid-rise tower, adequate separation of the towers should be ensured to prevent their appearance as a single bulky structure. Shadow studies would be required to ensure sufficient direct sunlight on Van Ness Avenue throughout the day.

5. The facade designs for all new development should be carefully detailed in order to create a human scale at the sidewalk level. The building base should be separated from the rest of the facade through variations in surface color and texture, or by using a projecting or wide horizontal element.

6. New development should incorporate on-street landscaping including planting of deciduous street trees along both sides of the Avenue and the provision of appropriate street furniture.

Generally, the urban design objectives summarized above reflect the same principles reflected in the adopted objectives and policies of the Urban Design Element in the San Francisco Comprehensive Plan. Table 4 on the next page contains a comparison between these two sets of objectives.

Views

Development on the identified soft sites would alter the San Francisco skyline. Long range views from Twin Peaks and other elevated locations south of the Avenue would include a number of new mid-rise structures along Van Ness Avenue. Views west from Nob Hill and east from the Western Addition and Pacific Heights would also be affected. Likewise, a number of short-range views from existing residences and offices along Van Ness and adjacent streets would be affected by new development. Setbacks from the property line at a height over 40 feet can be imposed by the Planning Commission if deemed desirable.

TABLE 4:
RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE MASTER PLAN* AND THE PROPOSED VAN NESS AREA PLAN OBJECTIVES

PROPOSED URBAN DESIGN OBJECTIVES	APPLICABLE URBAN DESIGN POLICIES OF M.P.
	Policies for City Pattern
Objective 4: Encourage development which reinforces topography and urban pattern, and defines and gives variety to the Avenue.	Policy 2: Recognize, protect and reinforce the existing street pattern, especially as it is related to topography. (page 10)
Policy 1: Establish height controls to emphasize topography and adequately frame the great width of the Avenue.	Policy 3: Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts. (page 10)
Policy 2: Encourage a regular street wall and harmonious building form along the Avenue.	Policies for Major New Development
Setbacks-Policy 1: Continue the street wall heights as defined by existing significant buildings and promote an adequate enclosure of the Avenue.	Policy 1: Promote harmony in the visual relationships and transitions between new and old buildings. (page 36)
Objective 5: Encourage distinguished architecture whose scale, composition and detailing enhances the overall design structure of the Avenue and relates to human scale.	Policy 5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development. (page 36)
Policy 1: Design exterior facades which complement and enhance significant works of architecture along the Avenue.	Policy 6: Relate the bulk of building to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.

* Department of City Planning, San Francisco Comprehensive (Master) Plan - Urban Design Element, 1971. (Page references are shown in parentheses.)

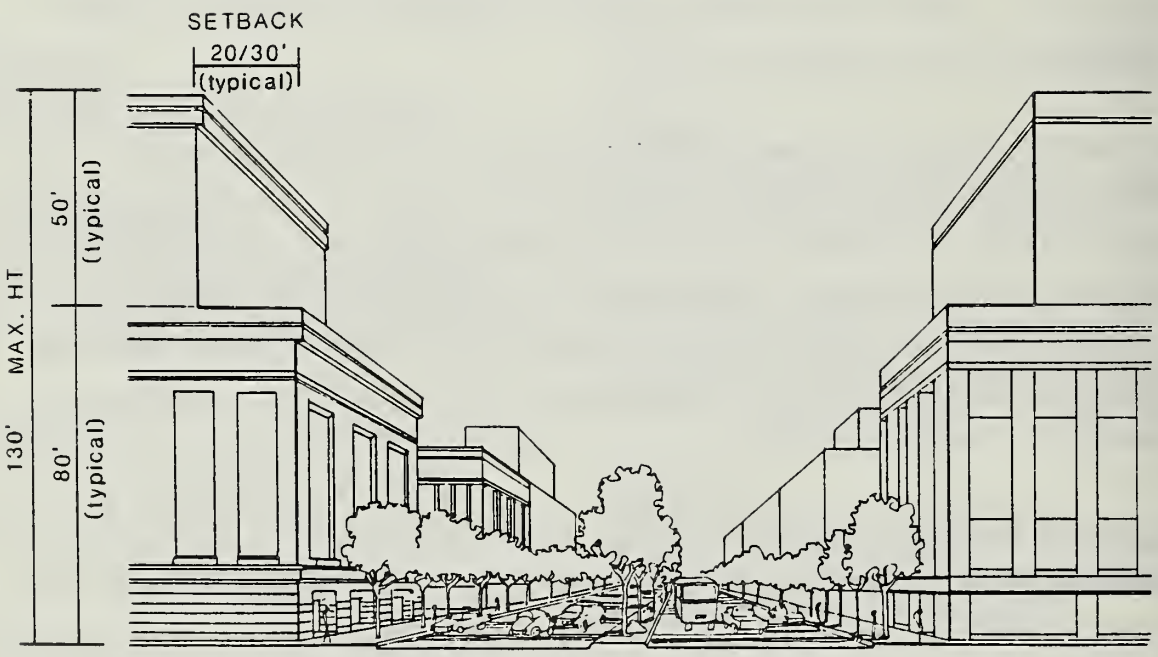
Figure 8, next page, shows the simulated effects of building forms promulgated by the Plan on Van Ness Avenue from a street-level perspective.[1] The building mass forms representing maximum buildout on development sites assume setbacks will be imposed.

Climate/Wind and Shadow Impacts

Pedestrian thermal comfort is determined by a number of variables, including temperature, humidity, clothing, level of activity, wind speed and presence or absence of direct sunlight. Full build-out of the soft sites as permitted under the proposed Plan would result in changes in windspeed and the presence of direct sunlight. Windspeeds would be expected to increase locally as more buildings with 40- to 80-foot building walls and 130-foot recessed towers are built. Similarly, shadows would be expected to increase somewhat during the day.

The urban design policies and controls under the Plan that address upper-story setbacks would assist in reducing new shading of Van Ness Avenue and adjacent streets. Although 130-foot building heights may be approved under the Plan with conditional use authorization, the Plan would leave the imposition of a mandatory setback above a height of 40 feet to the discretion of the City Planning Commission. This measure could reduce the potential shadow impacts of new buildings.

Wind tunnel analyses would be required for proposed new buildings along the Avenue to ensure compliance with the wind speed criteria contained in the proposed ordinances accompanying the Van Ness Avenue Plan, which call for the avoidance of building forms which cause wind speeds in excess of 11 mph where people are walking and 7 mph where people are sitting.



FUTURE STREETSCAPE UNDER VAN NESS PLAN

FIGURE 8

For the purpose of analyzing the possible shadow impacts of buildings allowable under the height and bulk controls of the proposed Plan, four potential development sites were selected. A sample development site was chosen on each side of the street, in both the 130-foot and the 80-foot height districts. Building site I is located on the west side of Van Ness Avenue between Jackson and Washington Streets. Building site II occupies the east side of Van Ness Avenue between Sacramento and Clay Streets. Sites I and II are both located in the proposed 80-foot height district. Building sites III and IV are within the 130-foot height district and are located on the west and east side of Van Ness Avenue respectively, between Post and Sutter Streets.

On these chosen sample sites, hypothetical building envelopes were developed for each site using the maximum permitted FAR at the maximum height. Shadow patterns for the proposed buildings are shown for 10:00 a.m., 12:00 noon, and 3:00 p.m. during winter and summer solstices, when the sun is at its lowest and highest points, and during the spring and fall equinoxes when the sun is at its midpoint. (See Figures 9 - 16, following the next page.)

The analysis includes shadows cast on streets, sidewalks and alleys in the area potentially affected by the proposed buildings. The shadow outline of the project is shown only on the streets and sidewalks; shadows that would be cast on building rooftops are not shown. The diagrams demonstrate only the shadows that would be cast by the buildings assumed to be developed on the sample sites; existing shadows are not shown. The net new shadow created by the proposed buildings thus might be less than the shadows shown on the diagram. These fairly detailed shadow analyses provide general examples of the types of shadows that could result from development under the Van Ness Avenue Plan. Specific proposals would, of course, have different shadow effects which would require project-specific shadow studies to determine.

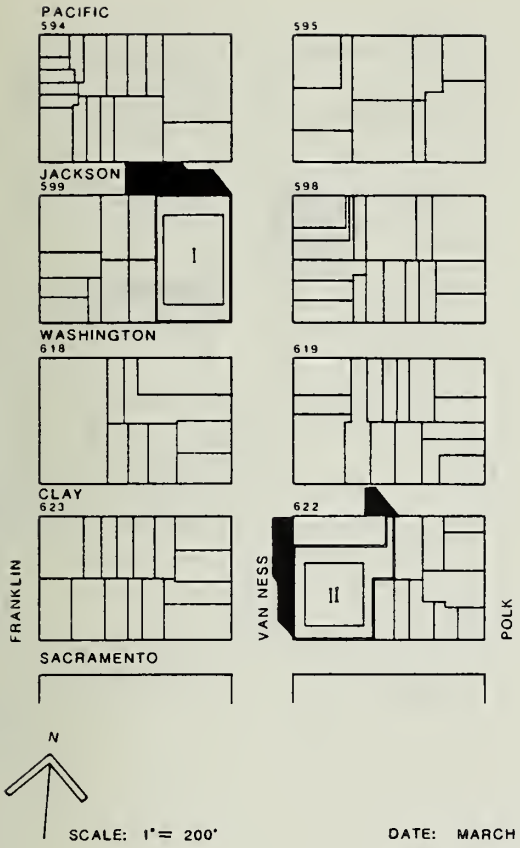
March 21 (PST) (Figures 9 & 10): Shadow impacts of the projected buildout on the four development sites would impact mainly the east-west side streets intersecting Van Ness Avenue. While the Van Ness sidewalks opposite the development sites would not be shaded at any time of the day, side streets

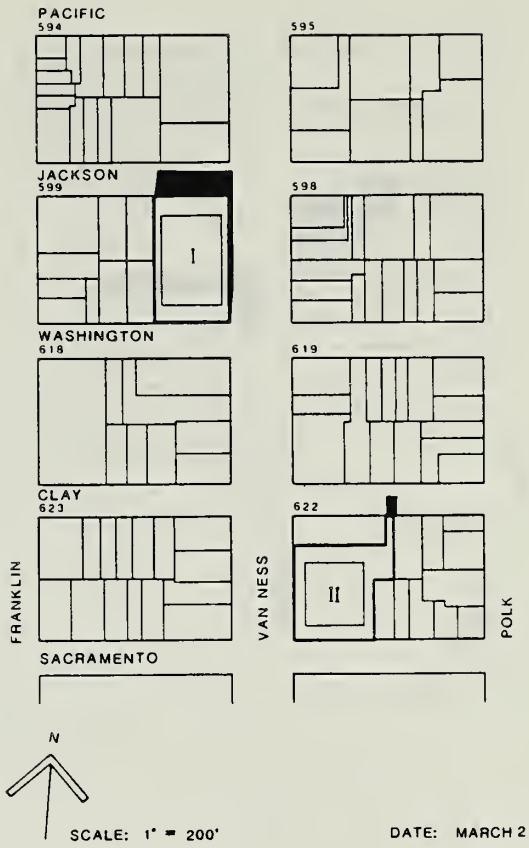
such as Jackson, Sutter and Hemlock would be subject to complete or partial shading along the development sites, especially in the early morning and late afternoon hours.

JUNE 21 (DST) (Figures 11 & 12): New shadows created by the projected buildout of the development sites would generally not affect the sidewalks opposite the development sites, with the exception of two small segments of Hemlock Street during the morning and noon hours.

SEPTEMBER 21st (DST) (Figures 13 & 14): Shadow impacts during September would be similar to those shown for March; mainly the east-west sidestreets intersecting Van Ness Avenue would be affected during the early morning and late afternoon hours.

DECEMBER 21 (PST) (Figures 15 & 16): Shadow impacts resulting from the projected buildout of the development sites would shade the side streets adjacent to the development sites in their entirety throughout the day. During the afternoon hours, Van Ness Avenue would be shaded in its entirety in parts of the area adjacent to the development sites.





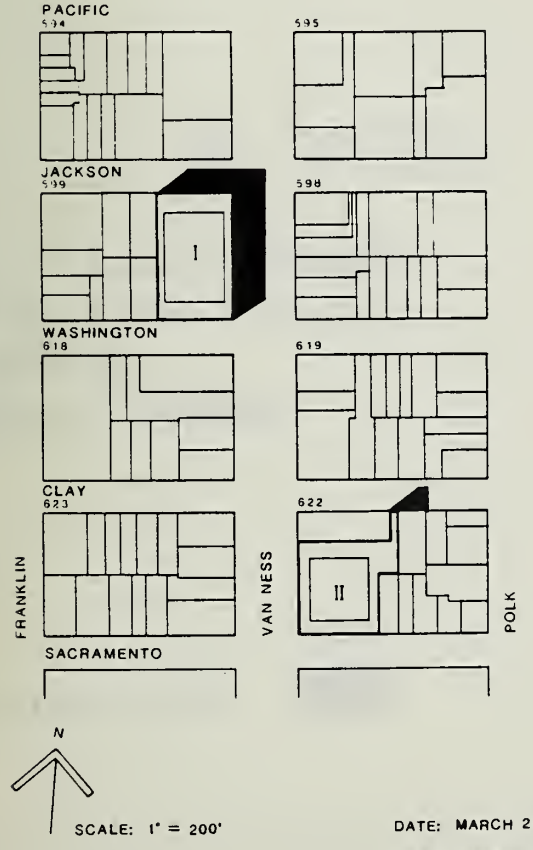
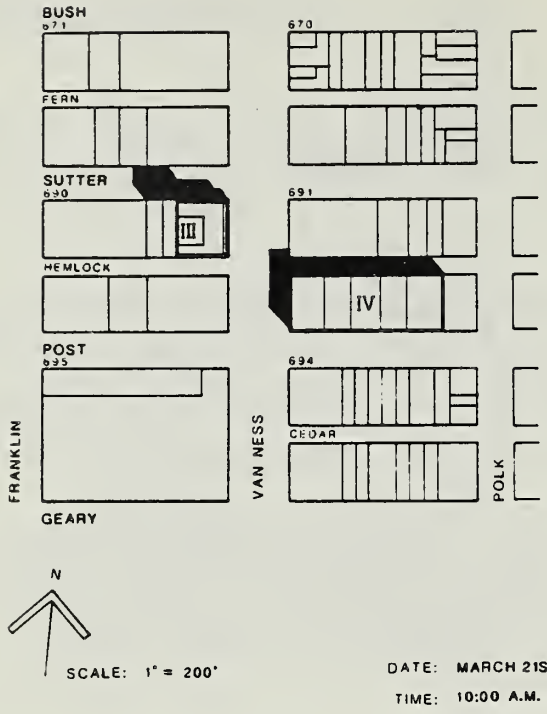
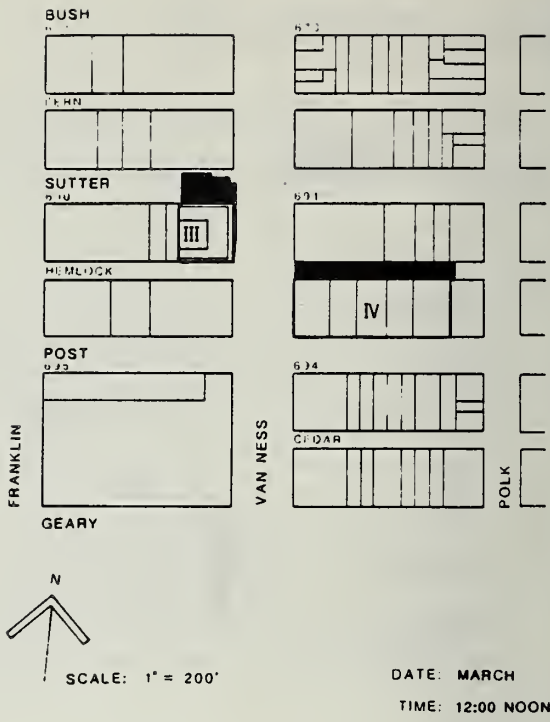


FIGURE 9

SHADOW IMPACTS OF PROTOTYPICAL SITES I AND II, SPRING EQUINOX

NEW SHADOWS





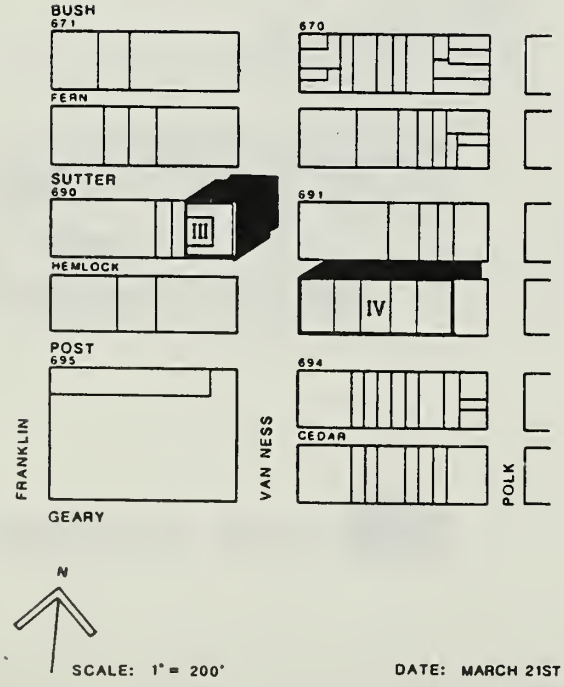
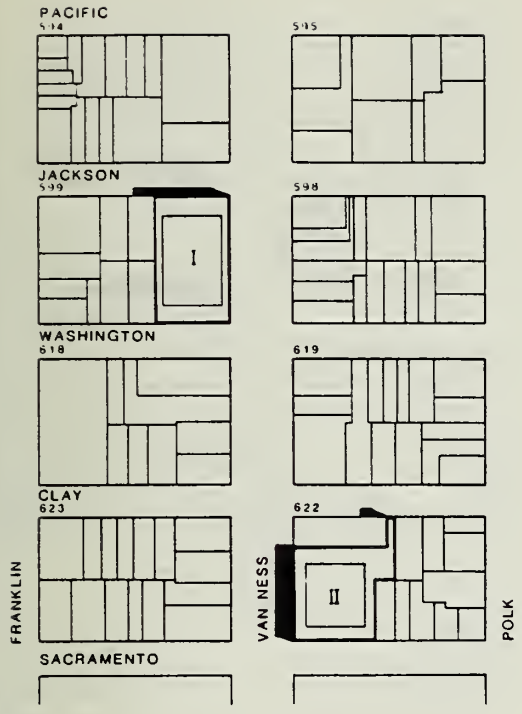
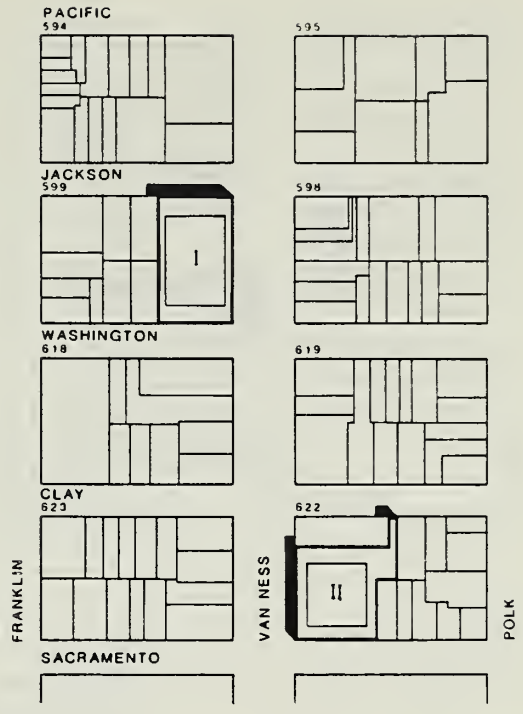


FIGURE 10

SHADOW IMPACTS OF PROTOTYPICAL SITES III AND IV, SPRING EQUINOX

NEW SHADOWS





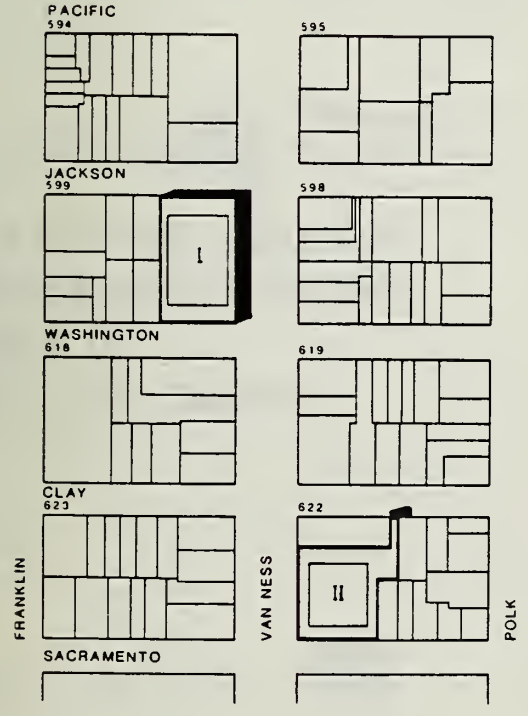
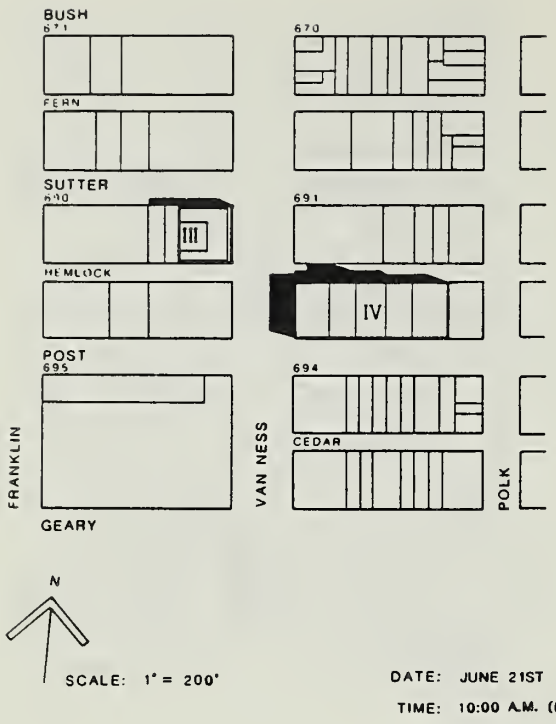
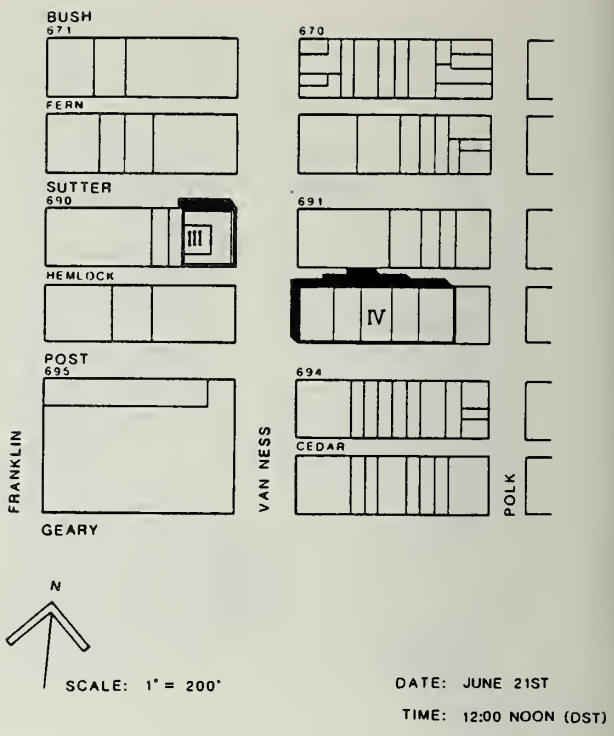


FIGURE 11

SHADOW IMPACTS OF PROTOTYPICAL SITES I AND II, SUMMER SOLSTICE

NEW SHADOWS





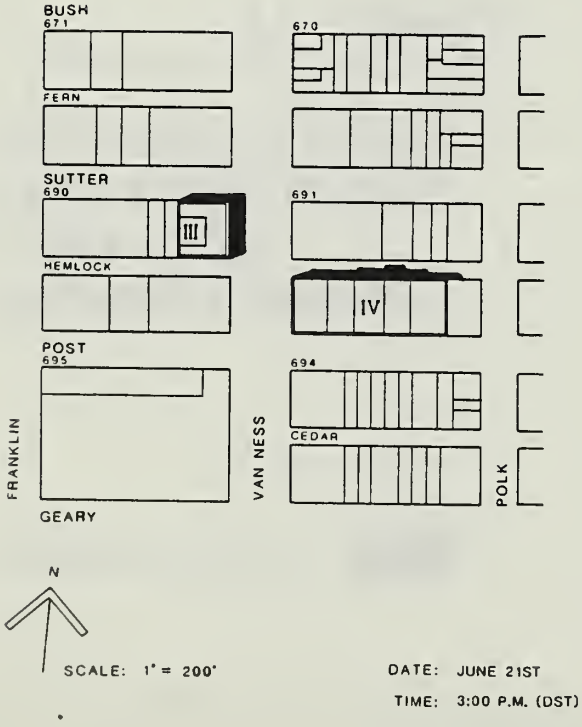
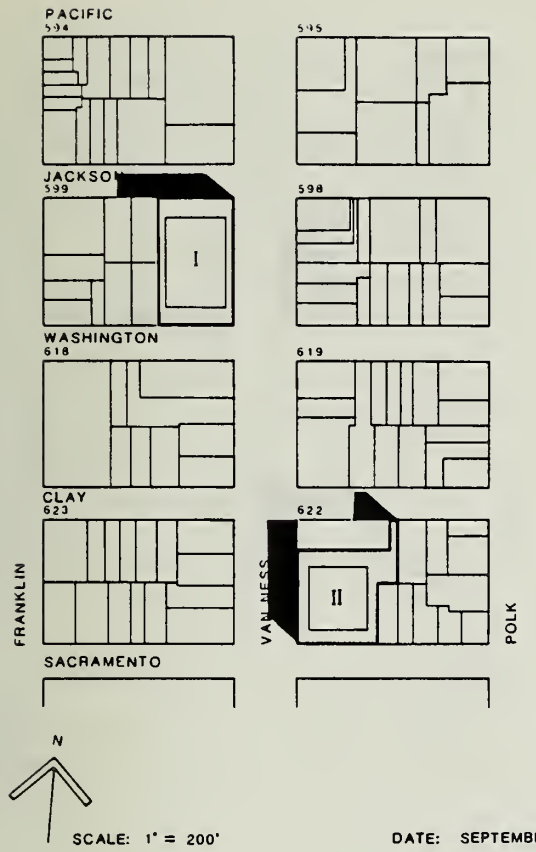
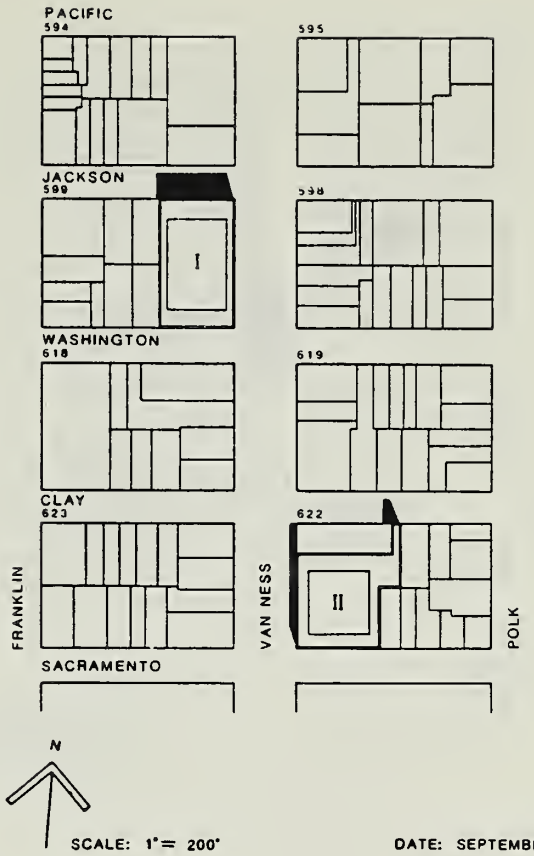


FIGURE 12

SHADOW IMPACTS OF PROTOTYPICAL SITES III AND IV, SUMMER SOLSTICE

NEW SHADOWS





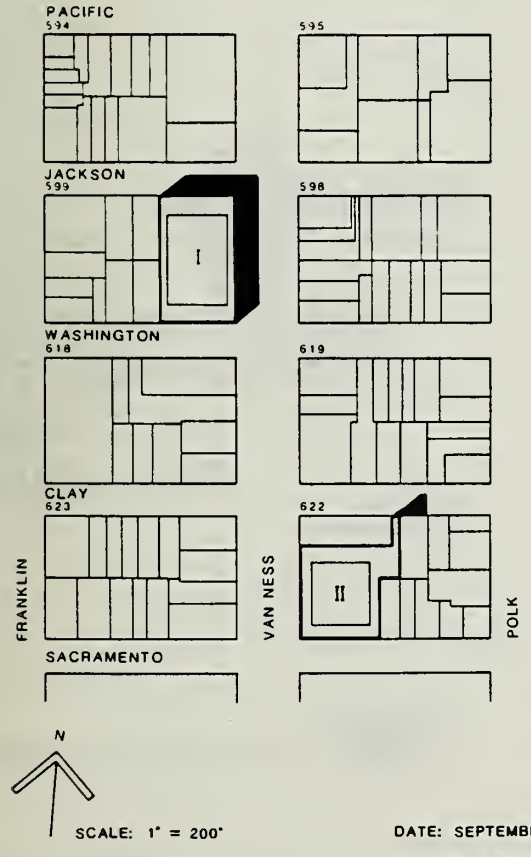
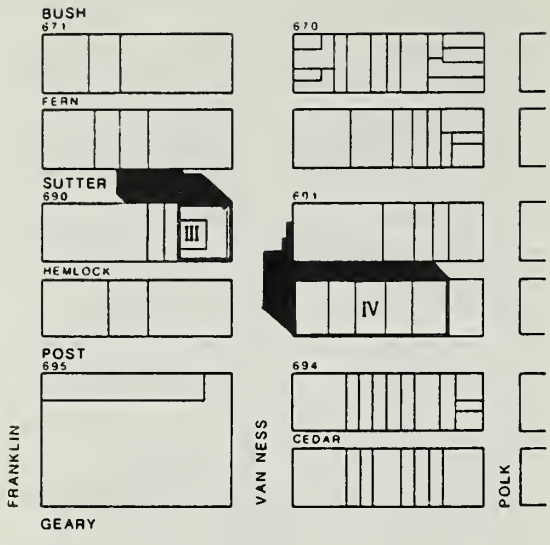
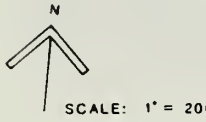


FIGURE 13

SHADOW IMPACTS OF PROTOTYPICAL SITES I AND II, FALL EQUINOX

NEW SHADOWS





SCALE: 1" = 200'

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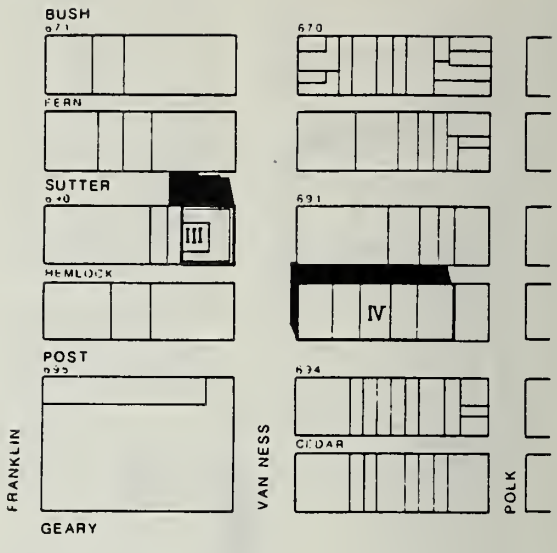
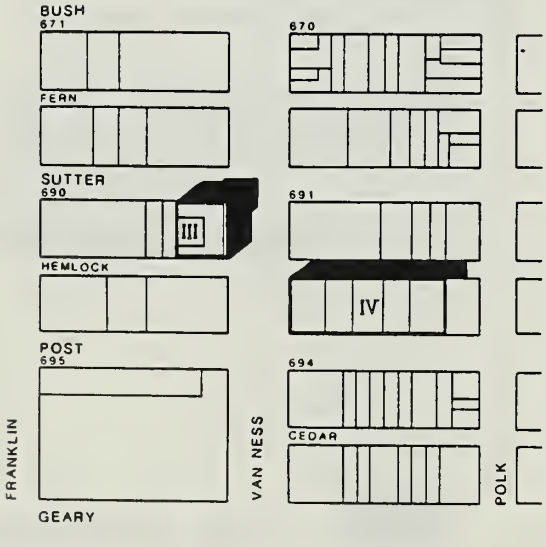
TIME: 10:00 A.M. (DST)



SCALE: 1" = 200'

DATE: SEPTEMBER 21ST
TIME: 12:00 NOON (DST)



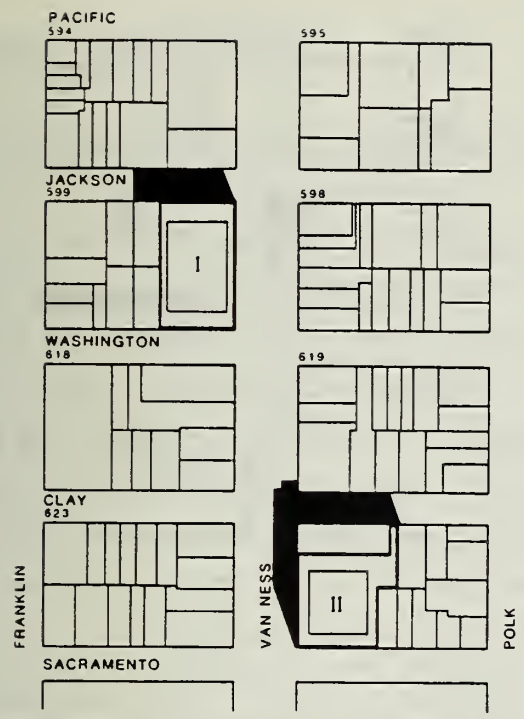
SCALE: 1" = 200'

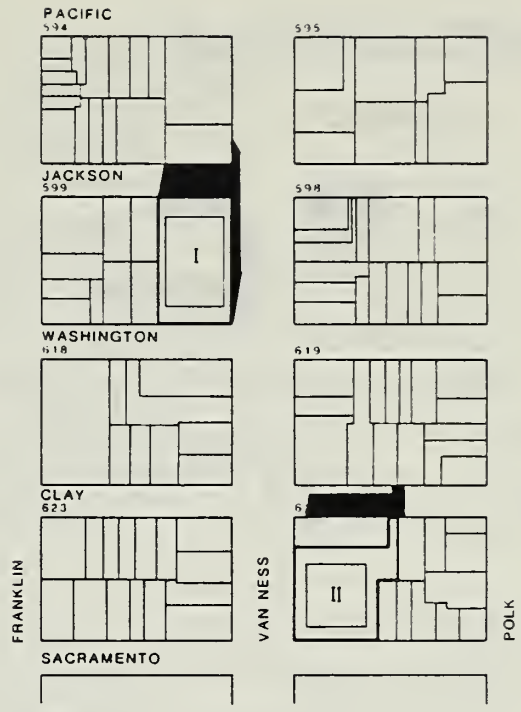
DATE: SEPTEMBER 21ST
TIME: 3:00 P.M. (DST)

FIGURE 14

SHADOW IMPACTS OF PROTOTYPICAL SITES III AND IV, FALL EQUINOX

NEW SHADOWS





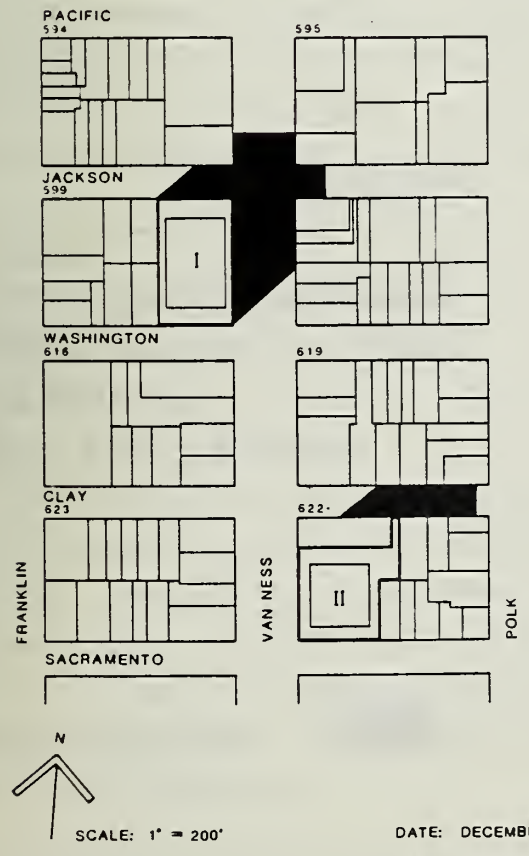
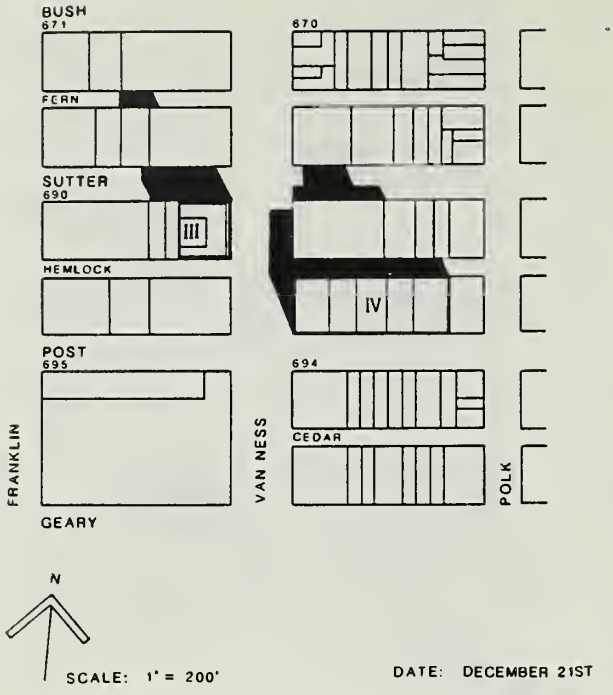
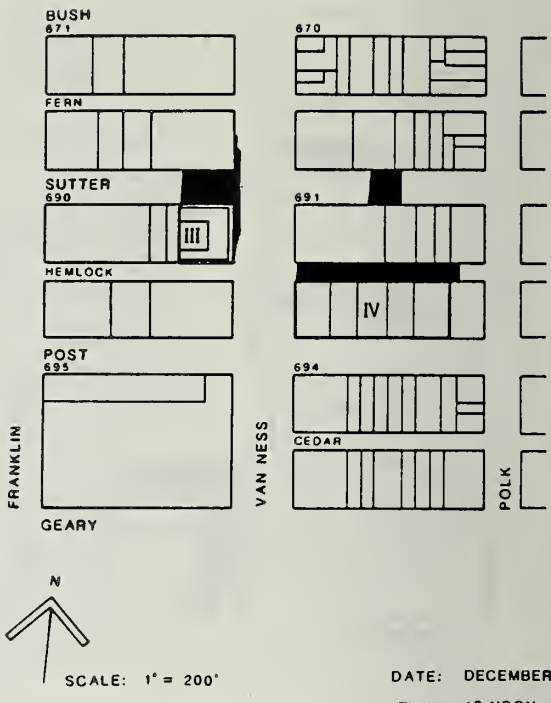


FIGURE 15

SHADOW IMPACTS OF PROTOTYPICAL SITES I AND II, WINTER SOLSTICE

NEW SHADOWS





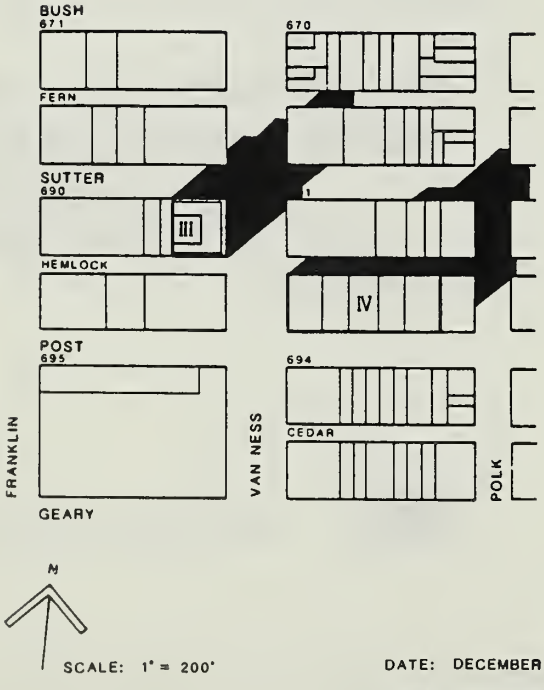


FIGURE 16

SHADOW IMPACTS OF PROTOTYPICAL SITES III AND IV, WINTER SOLSTICE

NEW SHADOWS

C. CULTURAL AND HISTORIC RESOURCES IMPACTS

The Van Ness Avenue Plan recommends preservation of about 35 buildings which have been identified in the Plan as architecturally significant and which individually contribute to the collective urban design and identity of the Avenue. The preservation policies are designed to protect the Avenue's most distinguished architectural resources and to enhance the urban design and general livability of Van Ness as an attractive residential boulevard. The policies focus upon those structures representative of past eras or functions of the Avenue (such as auto showrooms/repair facilities, or pre-earthquake houses). They are not exclusively oriented toward structures of exceptional architectural merit, but also toward buildings whose significance is largely contextual or historical. The Plan includes specific statements that direct the appropriate degree of preservation and alteration for each of the buildings.

The Landmarks Preservation Advisory Board (LPAB) has the authority to investigate all significant structures identified in the Plan for their eligibility for city landmark status. The actions of the LPAB are independent and are not mandated by the proposed Van Ness Plan.

Both of the existing designated city landmarks (British Motors showroom and Don Lee Building) within the study area are subject to a separate, mandatory review of any alteration or demolition proposal as established in Article 10 of the City Planning Code.

The proposed Plan would facilitate preservation of significant structures along Van Ness Avenue through economic incentives. For Subarea 1, the proposed implementing zoning controls would not require mandatory housing for rehabilitation and most adaptive re-uses of buildings. In many cases, rehabilitation of existing buildings would thus become economically more attractive than their demolition, facilitating retention of identified significant buildings.

For Subarea 2, the proposed RC-3 zoning constitutes a substantially more restrictive set of controls than the existing C-2 controls, such that the significant structures identified in this subarea, most of which contain housing uses, would not be vulnerable to demolition and redevelopment to the same degree as they would be under existing zoning in the absence of specific preservation controls. The RC-3 controls proposed in Subarea 2 require conditional use review by the Planning Commission for any proposal for non-residential uses at the second story or above, effectively restricting substantial intensification of commercial use. In the case of such proposals for significant buildings in Subarea 2, the policies of the Van Ness Area Plan calling for preservation must be considered before the Planning Commission could act on the conditional use application. For Subarea 3, there are no significant buildings that have been identified, and thus none of the preservation policies would apply.

Taken together, the proposed Master Plan policies and various economic incentives are considered strong enough to result in the preservation and rehabilitation of most buildings recommended for preservation. However, some buildings of merit would be potentially vulnerable to demolition in the absence of strong legislation mandating their preservation.

D. HOUSING, POPULATION AND EMPLOYMENT IMPACTS

Housing

Assuming full development of all 50 soft sites, assembled into 27 development sites, about 2,200 net new dwelling units (at an overall average 800 sq. ft. per unit) could be expected to be developed within the study area. Depending upon the average unit size, between 1,350 (at 1500 sq. ft. per unit) and 4,054 (at 500 sq. ft. per unit) units could be constructed within the corridor, although market trends would most likely result in construction of a mix of unit sizes, averaging about 800 sq. ft. Assuming that development under the proposed Plan would add approximately 2,200 units, a total of approximately 4,600 dwelling units on Van Ness Avenue would result. Based on existing area household size Census data, this residential development potential would increase the residential population by about 3,180 persons to a cumulative total of about 6,780 persons. This represents a 90 percent increase in local resident population.

Under this development scenario, approximately 24 existing low- to moderate-income level rental units could be demolished to make way for new, mixed use, predominantly residential development. Under the proposed controls, demolition of existing housing would require conditional use authorization by the Planning Commission pursuant to Section 303 of the City Planning Code. The Planning Commission would take the policies of the Residence Element regarding preservation of affordable housing into consideration in their review of the conditional use application.

Full development under the proposed plan could result in construction of dwelling units priced from about $160,000 to $200,000 (1986 dollars) assuming an 800 sq. ft. unit size, and average current land, construction and development costs for a mixed use, midrise building. Actual range of prices for all types of units which could be constructed would be greater. These units might be purchased as investments and turned into rental housing or they might be owner-occupied. If rental housing, they would compete on the open market and may command rents of about $1,000 per month (based on similarly

sized units in the Opera Plaza development at Golden Gate and Van Ness.). If the units were purchased as owner-occupied condominiums, purchasers would haveto earn about $60,000 to $70,000 per year to afford expected $1,800 to $2,000 monthly mortgage and homeowner's association costs. This would reflect an addition of a substantial number of middle to upper-middle income households where there is presently a majority of low- and moderate income housing.

The most notable change could be an increase in middle to upper-middle income households with one or two working adults. It is believed that very few households with small children who could afford $200,000 homes would choose to live within the urban environment along Van Ness Avenue. With this addition, there would be an increase from 40 to 80 percent of the resident population in this income category on the Avenue.

The Plan policies could assist in the retention of existing housing units, which is a primary strategy for limiting increases in the cost of housing in San Francisco. In light of the relatively high cost of development in the city, it is generally not economically feasible to market newly-constructed housing at the same rental/purchase prices as existing housing in a given area. However, there may be a tendency for rental/purchase prices to increase if a substantial amount of new residential development is actually constructed and occupied along Van Ness Avenue. To the extent prices of existing housing increase, the Avenue's existing low- and moderate-income housing stock would be transformed to a more moderate- to higher-income housing stock.

Although proposed density limits and parking requirements could facilitate the development of less expensive units, current economic trends indicate that very few low- or moderate-income units would be produced without some form of subsidy assistance.

Employment

Full development of all 50 soft sites, assembled into 27 development sites, could result in the net addition of about 1,100 jobs, about a 10

percent increase in employment within the study area. The mix of business activities is expected to remain similar to the present mix. Refer to Table 5 for an employment breakdown by occupation..

TABLE 5: VAN NESS AVENUE PLAN STUDY AREA
POTENTIAL NET CHANGE IN EMPLOYMENT

Employment Type	Net New Building (Sq. Ft.)	Density Ratio (Employees/ Sq. Ft.)	Estimated Change In Employment
Office	+ 382,700	1:275	+1,386
Retail	+ 50,800	1:350	+ 145
Hotel	- 132,700	1:900	- 147
Auto Showrooms	- 569,200	1:1,865	- 305
Total			+1,079

Relationship Between Housing and Employment

The key objective of the Van Ness Avenue Plan (VNAP) is to introduce a significant new housing opportunity in San Francisco, a city with an otherwise limited potential to expand its housing supply.

Given the development potential under the Plan, there would be a substantial net increase in the number of dwelling units relative to the increase in employment in the Plan area. As such, it is expected that VNAP housing would accommodate additional work force associated with downtown employment growth, and contribute to an improved balance between employment growth and housing need. This housing would become integrated into, and

subject to the dynamics of, a larger citywide and regional housing market. Those dynamics are recognized and discussed in detail in the Downtown Plan EIR, which is incorporated by reference.

The Bay Area offers many amenities which make it a desirable place in which to live. In general, the demand for housing in the Bay Area region and San Francisco in particular has been strong, and supply has not kept up with demand in many areas. One result is an increase in the prices and rental rates of housing, which play a determining role in selecting a place of residence. Many factors play a role in this current housing situation, including the attractiveness of diversity in life styles, changes in household income, employment growth; and changes in demographic and household characteristics. Many circumstances other than employment growth play a role in affecting the demand and availability of housing. However, with continued employment growth, there would be additional demand for San Francisco housing, which would be added to an otherwise competitive market with relatively high prices and rents.

The Downtown Plan EIR forecasts an increase in the percentage of C-3 district employees that would reside in San Francisco, many of whom are likely to have preferences and resources for the types of dwelling units expected under the VNAP and other new residential areas in close proximity to the C-3 district. This is also likely to be the case for employment growth in other areas of the greater downtown. The potential future residents of dwelling units on Van Ness Avenue, however, cannot be addressed simply in terms of forecasted growth in greater downtown employment. Not all workers employed in downtown San Francisco will be able to afford new housing on Van Ness Avenue. As new housing is built, those can afford it will move in and others will take the housing they vacate, thereby vacating their housing for other people, and so on. The dynamics which occur as people move in and out of the city (and the region) for a variety of reasons is an acknowledged and normal circumstance of the housing market. This "re-shuffling" pattern explains why households can be added and absorbed on Van Ness Avenue even though the VNAP is not expected to directly produce housing that all can afford.

Housing which could be constructed under the VNAP is included in a listing of housing opportunity sites in the Residence Element of the San Francisco Master Plan, which was incorporated into the assumptions of future housing supply in the Downtown Plan EIR analysis. The Downtown Plan EIR assumed that the increasing acceptance of higher density, central city living would support more infill residential development than has occurred in the past (IV.D.59). Proportionally more of the growth in housing in the future is expected to occur in the eastern portions of the City due to opportunities for larger scale, mixed-use developments and the efforts of public agencies to rezone certain areas for residential development (IV.D.60). Many such units are likely to be oriented toward singles, younger adults and generally smaller households (IV.D.59) Potential new housing units in mixed-use developments in the Van Ness Plan are expected to have these characteristics.

The examination in the Downtown Plan EIR of the additional employment forecast in the C-3 district, in conjunction with the additional housing which is likely to be developed throughout the City (including the Van Ness corridor), concluded that there would be more additional supply relative to additional demand in the future that in the past. The primary reason is that housing market factors together with local policies and redevelopment programs are expected to support a larger addition of housing in the City than occurred in the past two decades. Nevertheless, San Francisco is unlikely to accommodate all of the households that would otherwise choose to live in the City (IV.D.81a). This would continue to be true after the units predicted under the Van Ness Avenue Plan were occupied.

GROWTH INDUCEMENT

Potential development under the Van Ness Avenue Plan would not directly affect properties lying within the adjacent Polk Gulch, North of Market (Tenderloin), Western Addition, Hayes Valley, Pacific Heights or Russian Hill neighborhoods in the short term. The boundaries of the Van Ness Plan Area have been drawn to minimize land use changes to peripheral neighborhoods. The boundaries generally follow existing C-2 district and Special Use District boundaries and generally include Van Ness frontage properties or adjacent soft

sites whose future development would relate more strongly to Van Ness Avenue than to Polk or Franklin Streets.

Some gentrification of the Western Addition and Hayes Valley has occurred westward from Van Ness Avenue due partly to the influence of the Performing Arts Center in the Civic Center area and developments (such as Opera Plaza) in portions of Van Ness under Redevelopment Agency jurisdiction. The past magnitude of upgrading, and its geographical extent attributable to the influence of new development on Van Ness Avenue, is unknown. Its future influence is speculative and cannot be quantified but could potentially affect the North of Market (Tenderloin) and Polk Gulch areas. Potential new construction and gentrification in the Tenderloin would be moderated by provisions of the North of Market Residential Special Use District (NOMRSUD), added to the Planning Code in 1985. Provisions of NOMRSUD are intended to protect and enhance housing resources in the area and to conserve and upgrade existing low and moderate income housing stock. Height limits were lowered and certain uses restricted under NOMRSUD to stabilize land values and discourage speculation. Potential new construction and gentrification in Polk Gulch would be moderated and controlled by provisions of the Polk Street Neighborhood Commercial District (NCD). The Polk Gulch area has been under temporary Neighborhood Commercial controls which are proposed to be made permanent later in 1987. Among the purposes of the NC controls and the NC Master Plan amendments are the conservation of existing housing and the maintenance of neighborhood-serving commercial uses.

Present market conditions along Van Ness Avenue do not suggest that new development would affect the value of adjacent properties outside the Plan area. Current land prices along the Avenue do not yet appear to reflect the recent softening of the office and luxury condominium markets in San Francisco. A number of parcels in the Plan area have been on the market for more than a year without attracting buyers, evidence that their pricing does not reflect a current and realistic projection of their actual earning potential. It is therefore highly probable that in a fairly efficient local real estate market, the new market conditions will soon begin to manifest themselves in lowered land prices. Once this adjustment has taken place,

development along the Avenue would take place at an accelerated pace. Properties adjacent to the plan area, east of Franklin and west of Polk Streets, feature assessed property values which reflect the currently overpriced Van Ness Avenue market. It is therefore unlikely that new development along the Avenue would significantly change market conditions in these areas in the short term.

As a long-term side effect of the proposed Plan, the general upgrading of the retail environment along the Avenue could encourage a similar process along Polk Street and commercial portions of Franklin Street and cross streets between Franklin and Polk. Some low-volume retail businesses or large space-user retail businesses may not choose to or be able to pay higher commercial rental rates and thus relocate out of the area; higher volume or smaller-space retail businesses would be expected to replace them.

The proposed Plan would protect and expand the supply of housing through increased housing requirements and housing preservation controls. Together with existing and proposed neighborhood commercial zoning controls in adjacent locations, the area would continue to be primarily residential in character.

E. TRANSPORTATION, CIRCULATION AND PARKING IMPACTS

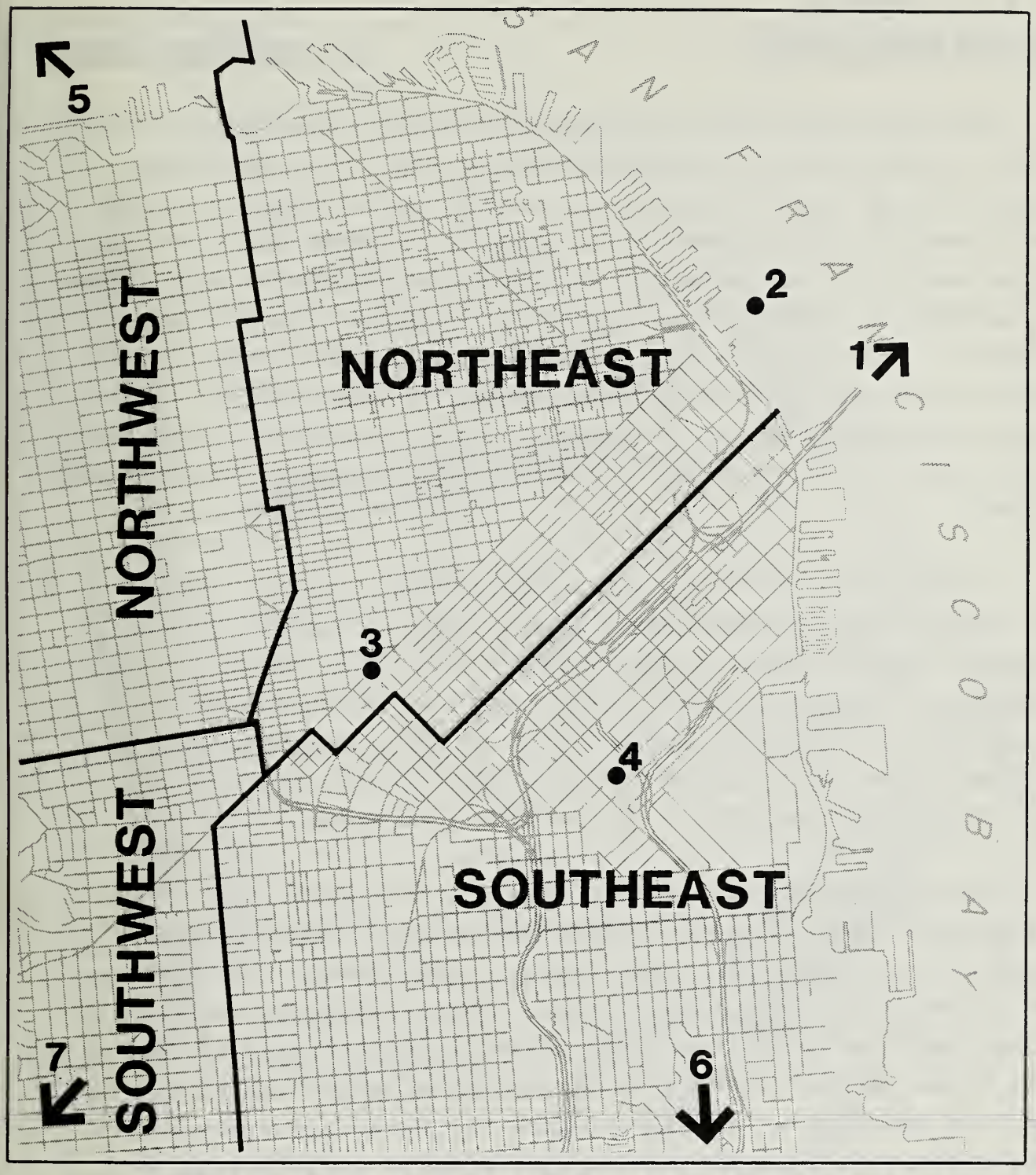
INTRODUCTION

Prior to presenting projected travel demand generated by the development potential identified in the Land Use Impacts section, this subsection outlines a two tier process by which travel demand is calculated. The discussion will define terms and the main variables that are factored into the travel demand analysis. Within this framework, distinguishing aspects between the two levels of analysis will also be described. Further details on the methodology and assumptions of this analysis is presented in Appendix I.

The two levels of analysis evaluate the local and cumulative transportation impacts generated by development potential under the Van Ness Avenue Plan. The cumulative analysis relies on the regional cumulative analysis presented in the Downtown Plan EIR, which is herein incorporated by reference and summarized below. The Downtown Plan EIR analysis evaluates the combined effects of trips associated with employment forecasts for the downtown (C-3) district, and projected travel volumes ("through travel") from elsewhere in the city and the region ("non C-3" travel) for the year 2000.[1] This is performed by projecting the C-3 and non C-3 outbound travel demand at various city and regional measurement points, or "screenlines," by mode of travel (e.g. automobile, carpool, transit) during the P.M. peak hour and peak period. It is during the p.m. peak hour (4:30-5:30) and period (4:00-6:00) that the most congested travel conditions occur, generated primarily by worker trips from their jobs to home (outbound trips).

Screenlines are designated on all travel corridors for all modes of travel and are shown in Figure 17 (next page). Their purpose is to establish measurement points which together account for cumulative travel demand. For vehicle traffic, the screenlines are located on the three main freeway corridors at the San Francisco County Line: the Golden Gate Bridge toll plaza accounts for vehicle traffic to the North Bay area; the Bay Bridge toll plaza for East Bay vehicle travel; and U.S. 101 and Interstate 280 at the San Francisco/San Mateo County line for South Bay vehicle travel.

FIGURE 17



SAN FRANCISCO TRANSPORTATION STUDY AREAS AND REGIONAL SCREENLINES

1 TRANSBAY TUBE – Screenline for BART Transbay
BAY BRIDGE TOLL PLAZA – Screenline for AC Transit, and Route I-80 Vehicles

2 SAN FRANCISCO BAY – Screenline for Tiburon, Sausalito and Larkspur Ferries

3 WEST OF BART CIVIC CENTER STATION – Screenline for BART West bay

4 WEST OF CALTRAIN DEPOT – Screenline for Caltrain

5 GOLDEN GATE BRIDGE TOLL PLAZA – Screenline for Golden Gate Transit Buses, and Route U.S. 101 (North) Vehicles

6 SAN FRANCISCO COUNTY LINE – Screenline for SamTrans (Mainline Routes), and Route U.S. 101 (South) Vehicles

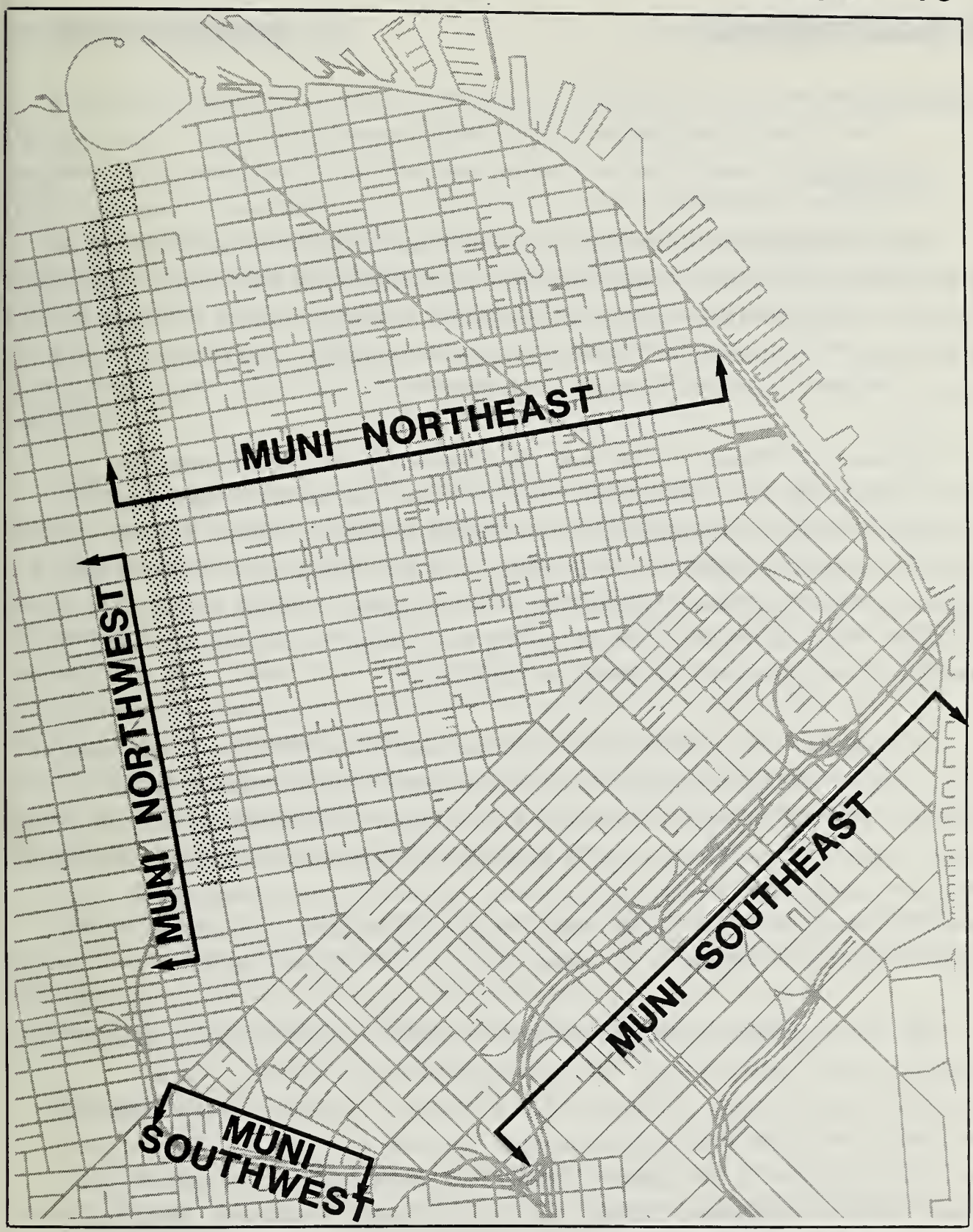
7 SAN FRANCISCO COUNTY LINE – Screenline for SamTrans (Daly City) and Route I-280 (South) Vehicles

These same county screenlines operate for several of the regional transit lines providing service to the greater downtown area, including Van Ness Avenue. The AC Transit screenline is located at the Bay Bridge toll plaza; the Golden Gate Transit screenline is located at the Golden Gate Bridge toll plaza; and U.S. 101 at the county line is the screenline for SamTrans. Other screenlines are similarly established for the remaining regional transit agencies: BART-East Bay is measured at the transbay tube; BART-West Bay is measured just west of the Civic Center Station; the Golden Gate and Tiburon ferries are measured at the Ferry Building; and the Caltrain Peninsula commute train screenline is located just outside the station depot at 4th and Townsend Streets.

The screenlines for MUNI service are not located at the city limits, but at locations where maximum passenger loading occurs (maximum load points, or MLPs) on individual transit routes leading to each of the four San Francisco "quadrants," as shown in Figure 18 (next page). As discussed later in the Transit Impacts section, the specific locations of the MUNI screenlines in relation to the location of the Van Ness Avenue Plan area affect how future MUNI trips are accounted for at its cumulative screenlines.

Impacts generated by the Van Ness Plan account for a portion of the non C-3 component impacts identified and analyzed in the Downtown Plan EIR. Recognizing that an analysis of the cumulative implications of the Plan does not provide enough detailed impact information with respect to the local streets and intersections immediately serving the project area, this section also focuses on local traffic, transit, parking and pedestrian impacts. The localized impacts do not directly translate into the more general cumulative impacts described in the Downtown Plan EIR because of the differences in travel associated within a local, as opposed to a regional, context. However, this analysis will establish a level-of-magnitude relationship between local and cumulative travel demand. The topic is discussed in more detail in the traffic impact analysis.

FIGURE 18



LOCATION OF MUNI CUMULATIVE TRANSIT SCREENLINES

Van Ness Plan Area

(Note: Screenline illustrations are schematic in nature.)

TRAVEL DEMAND

Methodology

The travel demand analysis begins with the application of specific trip generation rates to each kind of land use projected in the development potential. This results in the projected daily number of trips (or person trips ends, "PTE") generated by the development potential for all modes of travel (primarily vehicle, transit, and pedestrian).

This analysis focuses on the p.m. peak hour (4:30-5:30 p.m.) and peak period (4:00-6:00 p.m.) timeframes. The peak hour and period travel demands are derived from the projected daily PTE, based on data collected from an employee survey conducted for the Downtown Plan EIR analysis and from the MTC Regional Travel Characteristics Survey, prepared 1981. The MTC survey addresses travel characteristics of residents by areas in the region. The assumptions are presented in detail in Appendix I.

The peak hour and peak period PTE are assigned onto different travel modes (e.g. cars, transit, car pools, etc.), again based on survey data from the downtown district and the MTC resident survey data. In determining vehicle travel demand, an additional step is necessary to define auto occupancy rates, which are assumptions of the average number of persons per automobile or carpool. Due to this additional step, vehicle travel demand is expressed in terms of vehicle trip ends (VTE) rather than person trip ends (PTE).

Peak travel demand is defined not only in terms of time duration (hence "peak hour" and "peak period"), but also by direction of travel. At a cumulative impact level, the peak travel direction is outbound travel crossing the cumulative screenlines during the peak hour and peak period. For the most part, this outbound travel demand is generated by employee trips leaving the greater downtown employment center, destined for home. "Outbound" pertains to travel from the greater downtown (including part of the Van Ness Plan area) to points outside the downtown, beyond the screenline locations. Inbound trips refer to travelers with destinations within the greater downtown, including the Van Ness Plan area, from points outside.

Although the cumulative analysis focuses on the impacts of outbound trips, the analysis of localized transportation impacts reflect both inbound and outbound trips generated by the Van Ness Avenue Plan development potential. This is necessary because of the presence of the large residential component in the Van Ness Avenue Plan. Peak hour and peak period trips associated with projected housing under the Plan would be mostly inbound trips, since the housing generally would be the destination of workers leaving their jobs at the end of the work day. Thus, in order to evaluate full impacts of the Plan's development potential, an accounting of these inbound trips must be included.

One main component of travel demand that is reflected in the localized analysis but not in the cumulative analysis is "linked trips." Linked trips are generated when two or more visits are made in the course of a single person-trip. This typically occurs in mixed use districts where workers, residents, and visitors often stop at a number of commercial establishments on the way to work or home, or in the course of a shopping trip. These trips may or may not cross cumulative screenlines. If they do not cross a screenline, they would not be reflected in the cumulative travel demand. If a traveler makes two linked trips before crossing a screenline, the cumulative travel demand would only account for one trip, but the localized analysis would reflect the two trips made inside the screenlines.

The central point is that cumulative and localized transportation analyses do not measure the same conditions. As a result, it is not possible to sum up the number of trips in a series of localized areas and have the total correspond precisely with the broader area screenline measurements.

Projected Trips

Based on the development potential assumptions described in the Land Use Impacts section, the Plan could result in a net increase of 2,165 residential dwelling units in Subareas 1 and 2, with an accompanying net loss in commercial space of approximately 136,000 gross square feet, not counting hotels. (Despite the decrease in commercial floor area, there would be a net

increase in the number of trips generated because new commercial uses are expected to attract a higher number of trips than existing uses.) Ground floor area of new development is expected to be used for retail activity; much of the balance of commercial square footage in new development is assumed to be used for office space. Similar assumptions were made for the conversion of existing auto dealerships in significant buildings to other commercial uses. The remaining and dominant land use assumed to occupy the rest of the VNAP development potential is housing.

The development potential of the Van Ness Avenue Plan would generate about 19,100 additional daily person trip ends (PTE), an approximate 9 percent increase over calculated existing PTE in the study area. During the p.m. peak hour, approximately 3,100 net new PTE would be generated by VNAP development potential, and 3,900 net new PTE during the two-hour p.m. peak period. Table 6, next page, summarizes the changes in daily, peak hour, and peak period person trip generation by land use for the identified soft sites.

Table 6
Net Change in Person Trip Ends (PTE) for
Van Ness Avenue Plan Development Potential Sites
Year 2000

Land Use	Size[1]	Daily Trip Rate[2]	Daily	P.M. Peak Hour	P.M.Peak Period
Commercial					
New Office	479,300	18.1[3]	8,683	1,042	1,563
Minus Existing Office	96,600		1,750	210	315
Net Change	+382,700		+6,933	+832	+1,248
New Retail	629,800	68.0[3]	42,826	1,798	3,597
Minus Existing Retail	579,000		39,372	1,653	3,307
Net Change	+50,800		+3,454	+145	+290
New Auto Showrooms	-0-	5.8[4,5]	-0-	-0-	-0-
Minus Existing Showrooms	569,200		3,296	316	475
Net Change	-569,200		-3,296	-316	-475
SUBTOTAL - Commercial Floor Area Net Change	-136,000		+7,091	+661	+1,063
New Hotel	-0-	17.9[4,6]	-0-	-0-	-0-
Existing Hotel	76		3,150	189	378
SUBTOTAL - Hotel Net Change	-76		-3,150	-189	-378
Residential					
New Residential	2,189	7.0[4,6]	15,323	2,651	3,218
Existing Residential	24		168	29	35
SUBTOTAL - Residential Net Change	+2,165		+15,155	+2,622	+3,183
Total Net Change			+19,096	+3,094	+3,868

Notes:
1. Gross square feet, hotel rooms, or dwelling units
2. Trips per 1,000 square feet, dwelling unit or hotel room
3. San Francisco Dept. of City Planning, Downtown Plan EIR, 1984
4. ITE Trip Generation Manual, 3rd Edition, 1982
5. San Francisco Department of City Planning, Survey of Van Ness Avenue auto showrooms, 1986
6. Caltrans "Progress Reports on Trip Generation Research," 1981

TRAFFIC IMPACTS

Local Traffic Circulation

The Van Ness Avenue Plan calls for vehicular access to parking on development sites to be located primarily on the minor mid-block alleyways intersecting Van Ness Avenue in the southern portion of the project area, and on intersecting cross streets in the northern portion. The alleyways generally operate as one-way streets, with directional travel away from Van Ness Avenue to either Polk or Franklin Streets. Traffic inbound to new development south of California Street would therefore be forced to use Van Ness Avenue itself to access parking along the alleyways, at least for short segments. Similarly, outbound project traffic south of California Street would be forced to use Polk and Franklin Streets for short segments, until project traffic can be distributed to other, radial routes.

In Subarea 1, major intersecting cross streets are predominantly one-way operation, generally alternating in directional travel block-by-block. This has the effect of generating additional vehicle circulation along streets parallel to and intersecting Van Ness Avenue itself, as motorists seek access to or from more direct, radial routes. This additional vehicle circulation would not be present in Subarea 2, where streets intersecting Van Ness Avenue are generally two-way. Because sites identified for development potential are distributed throughout the project area, P.M. peak hour and peak period traffic would be fairly well dispersed among the streets included in the Plan area. Impacts of project-related P.M. peak traffic would be of most concern on Van Ness Avenue itself, on intersecting cross streets carrying outbound traffic from the downtown, and to a lesser extent on Polk and Franklin Streets.

The Van Ness Avenue Plan development potential would add approximately 700 net new vehicle trips to project area streets during the p.m. peak hour, and 850 new vehicle trips during the P.M. peak period. Trips were assigned to the regional highway network according to projected directions of travel (e.g. North Bay, East Bay, Peninsula, or within San Francisco) assumed in the Downtown Plan EIR analysis. Travel was assigned to local streets based on the

locations of potential development sites and their parking access. Vehicle use and occupancy for commute trips associated with the Plan's commercial development potential is assumed to shift toward a lower percentage of total commute trips and higher vehicle occupancies, similar to assumptions made for the Downtown Plan EIR. Vehicle use and occupancies for residential trips, however, is assumed to remain constant. Further detail on this methodology and assumptions are discussed in Appendix I.

The traffic volume generated by development potential under the Van Ness Plan represents a portion of the non-C-3 volumes already projected as part of the Downtown Plan EIR cumulative transportation analysis. Based on the Downtown Plan EIR, I-280 Transfer Concept Program and 1983 San Francisco Cordon Count analyses, data suggest that traffic volumes on local streets in the North of Market area will increase by about 11 percent by the year 2000. This increase would include increased traffic from both C-3 and non C-3 growth and would thus include projected traffic under the Van Ness Avenue Plan. Combined impacts of outbound p.m. peak traffic on local streets resulting from C-3 and non C-3 cumulative development (including Van Ness Avenue Plan development) are shown in Table 7 for selected project area streets. Those streets not shown in Table 7 do not generally carry large volumes of traffic in the p.m. peak, and have sufficient available capacity to absorb additional traffic from cumulative development (the estimated 11 percent increase) without degradation of levels of service. Generally, project-related traffic volumes during the p.m. peak hour or peak period would not exceed 50 to 100 additional vehicles per hour, respectively, on any of these streets.[2]

As stated earlier, traffic increases contributing to demand at cumulative screenlines resulting from the Van Ness Avenue Plan development potential would be a component of the non-C-3 travel analyzed in The Downtown Plan EIR. As such, vehicular travel from Van Ness Plan development potential assigned to the regional highway screenlines as shown in Table 8 is not additive to year 2000 traffic volumes analyzed in the Downtown Plan, but is a portion of the travel growth projected to the year 2000. Table 8 includes a column that provides an order of magnitude estimate of the share of projected cumulative screenline traffic demand generated by development potential under the Van Ness Avenue Plan.

TABLE 7: P.M. Peak Cumulative Traffic Volumes and Arterial Levels of Service (L.O.S.) for Streets in VNAP Area[1]
(Volumes are in Vehicle Trip Ends - VTE)

Street Segment	Existing Traffic Volumes[2] PM Peak Hour	Existing Traffic Volumes[2] PM Peak Period	Year 2000 Traffic Volumes[3] PM Peak Hour	Year 2000 Traffic Volumes[3] PM Peak Period	Existing L.O.S.[2] PM Peak Hour/Period	Year 2000 L.O.S[3] PM Peak Hour/Period	Estimated Increase Due to VNAP Alone (Per Hour)[4]
Polk St. N/B	350	650	400	700	E	E	few
Polk St. S/B	650	1300	700	1500	D	E	30
Turk Street	1400	2550	1600	2800	D	D	50
Ellis Street	700	1350	800	1500	D	D	30
Geary Boulevard	1300	2300	1500	2600	D	D/E	30
Sutter Street	900	1850	1000	2050	C/D	C/D	30
Pine Street	1800	3700	2000	4100	D	E	40
Broadway W/B	1200	N/A	1300	N/A	F	F	30
Lombard Street	1600	3100	1800	3400	E	E/F	20
Bay Street	1600	3150	1800	3500	C/D	D	few
Franklin Street	2150	4250	2400	4700	D	D/E	100
Van Ness N/B	1700	3400	1900	3750	E/F	F	100
Van Ness S/B	1500	3000	1700	3400	E/F	F	150
							610 TOTAL[5]

[1] Refer to Appendix I for assumptions regarding vehicle occupancy and trip distribution.

[2] Existing traffic volumes are based on 1983 San Francisco Cordon Count conducted for the San Francisco Department of Public Works. Levels of Service were calculated using an arterial flow methodology, as described in Appendix I.

[3] Projected traffic volumes for 2000 are based on C-3 and non C-3 traffic volume increases for local streets in The Downtown Plan EIR (EE81.3, certified October 1984), and estimates of volume increases from analysis of the I-280 Transfer Concept Program and the 1983 San Francisco Cordon Count. Level of Service designations were calculated by using an arterial flow methodology, as described in Appendix I.

[4] The methodology employed for this analysis does not generate separate estimates of Levels of Service for the peak hour vs. the peak period. It is therefore estimated that the Level of Service projections shown here are representative of both hours of the peak period.

[5] This table presents cross streets on Van Ness Avenue that either currently exhibit higher traffic volumes, and/or would receive a notable amount of travel demand from development potential under the VNAP. The rest of the peak hour and peak period trips would be dispersed among other cross streets which would not experience deterioration from their current levels of service of C or higher.

Table 8: Outbound P.M. Peak Hour and P.M. Peak Period Traffic Volumes and Capacities at Regional Screenlines

Time and Location	Capacity[a]	1984 Total Demand[b]	Estimated Van Ness Avenue Plan Demand	2000 Total Demand[c]	Est. Van Ness Avenue Plan Demand
P.M. Peak Hour					
Bay Bridge (I-80)	9,000	8,800	100	9,790	150
Golden Gate Bridge (U.S.101)	7,200	7,000	60	7,150	80
U.S.101(south of Harvey Way)	8,000	7,300	100	8,400	140
I-280 (between Alemany Blvd. & San Jose Av.)	8,000	8,100	60	8,650	100
P.M. Peak Period					
Bay Bridge (I-80)	18,000	18,100	200	19,330	240
Golden Gate Bridge (U.S.101)	14,400	13,700	100	14,850	100
U.S.101(south of Harvey Way)	16,000	13,500	150	16,530	200
I-280 (between Alemany Blvd. & San Jose Av.)	16,000	14,800	100	15,890	130

NOTES:

[a] Vehicles per hour for the peak hour and vehicles per two hours for the peak period. The Downtown Plan EIR, Appendix J, Table J.9, shows the relationship between volume-to-capacity ratios and levels of service for freeways. Although the capacity of the Bay Bridge is calculated to be 9,000 vehicles per hour (VPH), the one-hour demand value of 8,800 represents effective capacity. During high volume periods, traffic flow approaching the Bridge is sensitive to the concentration of merging vehicles and occasional interruptions by stalled vehicles and/or accidents.

[b] Bay Bridge Counts: MTC Traffic Series MA-62, Bay Bridge Toll Plaza.
Golden Gate Bridge Counts: Golden Gate Bridge, Highway and Transit District - April 1984 Average Daily Hourly Traffic Volumes, Golden Gate Bridge Vehicle Traffic - Southbound.
U.S. 101 Counts: Summary - Route Concept Report Route 101 SCL 0.00 to SON 56.24", Caltrans, October 4,1985.
I-280 Counts: Final "Summary-Route Concept Report Interstate 280 SCL R0.00 to SF9.20," Caltrans, December 12, 1985.

[c] Demand in excess of capacity as analyzed for the Downtown Plan EIR, based on the assumption that the Plan's goals for transit and ridesharing are not being met; refer to Downtown Plan EIR text (pp.IV.E. 33-34) for detailed discussion of implications of excess demand on transit use and increased ridesharing.

Table 8 indicates future travel demand in excess of the capacity levels assumed for the regional freeway screenlines, as presented in the Downtown Plan EIR analysis. The Downtown Plan EIR discusses some ways in which this excess demand could be accommodated by regional transit carriers serving the respective areas, and the resulting effects on passenger loading, which discussion is herein incorporated by reference.[3]

It is not possible to quantify precisely the number of projected cumulative screenline trips attributable to the Van Ness Avenue Plan. This is due to the effect of linked trips. As explained earlier in this section, linked trips occur when two or more visits are made in the course of completing one trip. They may occur internally within, or interactively between the VNAP area and the downtown districts or the rest of the city. Given that most of Van Ness Avenue serves as U.S. Route 101 through the city, and due to the close proximity of the C-3 district, many of the trips on Van Ness Avenue are linked to other trips.

Only a portion of the trips, such as primary trips from the workplace to home, would cross cumulative screenlines. Incidental trips within the Van Ness Avenue Plan area or between the Plan area and the C-3 districts that do not cross a screenline would not contribute to cumulative screenline demand. Therefore, a worker in the Van Ness corridor who completes an errand in the C-3 district and on Van Ness Avenue before crossing the Golden Gate Bridge to his home in Sausalito would be counted as three trips in the local analysis, but only one trip in the cumulative analysis. The ratio between primary and linked trips is inexact for the VNAP analysis. As a result, only general estimates can be provided of Van Ness-related travel as a component of the travel demand at the cumulative screenlines represented by each individual non C-3 planning area, such as Van Ness Avenue.

TRANSIT IMPACTS

The San Francisco Municipal Railway (Muni) operates three cross-town bus lines along Van Ness Avenue through the length of the project area, and another on Polk Street, one block to the east. Muni operates 19 radial bus

lines and/or community service bus lines which bisect the Van Ness Avenue project area. In addition, Muni Metro J, K, L, M, and N light rail lines run under Market Street, several blocks to the south of the project area. The closest Muni Metro stations which serve the project area are the Van Ness Avenue station, and the Civic Center station at Market and Eighth Streets. The California Street Cable Car line terminates at Van Ness Avenue.

Golden Gate Transit buses serve the project area directly, with lines along Van Ness Avenue to Lombard Street. SamTrans provides service to the Van Ness Avenue corridor in the Civic Center area. The nearest BART station is the Civic Center station, below the Muni Metro. While this station is within marginal walking distance to the southern end of the project area, most BART access for the project would require a transfer to Muni bus lines. Similarly, transfers on Muni lines would be required to link the project area with AC Transit and SP Caltrain, as well as private carriers.

Transit impacts from development potential under the Van Ness Avenue Plan are projected at the same transit screenlines as presented in the Downtown Plan EIR. Screenlines for the regional transit carriers were described earlier in this section and shown in Figure 17 on page 90; many coincide with the screenline locations designated for the regional freeway corridors. Muni screenlines are described below.

The majority of the study area is located within the greater downtown area, which is generally framed by four Muni screenlines used for analysis in the Downtown Plan EIR. These four screenlines establish the measuring points of Muni transit trips to four quadrants of San Francisco shown previously in Figure 18. All Muni routes providing service to/from the greater downtown area are assigned to one of these screenlines. The Northwest Muni screenline generally runs parallel to the west side of Van Ness Avenue, south of Washington Street. The Northeast Muni screenline runs east-west between Washington and Jackson Streets, as far west as Van Ness Avenue. The Southwest Muni screenline parallels 12th Street to the south, from Haight Street to Potrero Avenue. The Southeast Muni screenline runs along Townsend Street from the Embarcadero to San Bruno Avenue. Figure 18 shows the locations of each of these screenlines.

It should be noted that the Muni screenlines do not actually follow the perfect alignments that are schematically diagrammed in Figure 18. The actual screenlines are based on data on the number of patrons counted at the "maximum load point" for individual transit lines linking the downtown to various quadrants of the city. Within any given screenline, the maximum load points of the individual Muni lines occur in different locations that fall before or beyond the schematic screenline shown in Figure 18.

The Downtown Plan EIR estimated patronage for each transit carrier during the p.m. peak hour (4:30-5:30) and p.m. peak period (4:00-6:00), through the year 2000. The analysis assumed increases in capacity based on the then-current five year plans and discussions with staff for each of the transit agencies.[4] Similar to vehicle traffic, the transit demand generated by Van Ness Avenue Plan development potential that is assigned to transit corridor screenlines is not additive to year 2000 patronage estimates analyzed in the Downtown Plan EIR, but is a portion of the projected cumulative (C-3 and non C-3) travel demand.

Tables 9 and 10 show the approximate relationship of current (existing) ridership and projected Van Ness Avenue Plan transit patronage demand to the total cumulative demand at the regional screenlines, for the p.m. peak hour (Table 9) and p.m. peak period (Table 10) as analyzed for the Downtown Plan EIR. As is evident in these Tables, projected demand from potential development under the Van Ness Avenue Plan on regional transit carriers would be limited during the peak hour and period. Given these ridership levels, their presence or lack thereof would not affect the levels of service projected for each of the transit carriers in the Downtown Plan EIR.

The greatest effects would occur on Muni. Due to the predominately residential nature of development under the VNAP, transit demand would concentrate on the local carrier, which currently has a loading standard of 1.25 passengers per seat. Tables 9 and 10 below include projected demand for each of the Muni screenlines..

TABLE 9: OUTBOUND P.M. PEAK HOUR TRANSIT RIDERSHIP, PASSENGERS PER SEAT RATIOS (P/S), AND LEVELS OF SERVICE (LOS) AT REGIONAL AND C-3 SCREENLINES

TRANSIT AGENCY	SCREENLINE	1984 TOTAL DEMAND[1]	1984 P/S[2]	1984 LOS[3]	1984 ESTIMATED VNAP DEMAND[4]	2000 TOTAL DEMAND[5]	2000 P/S[5]	2000 LOS[5]	2000 ESTIMATED VNAP DEMAND[4]	1984-2000 CHANGE IN VNAP DEMAND
Muni	Northeast	7,400	1.18	D	200	8,800	1.05	D	400	200
Muni	Northwest	8,600	1.23	D	100	10,100	1.25	D	600	500
Muni	Southwest	12,000	1.11	D	100	16,600	1.42	E	100	few
Muni	Southeast	5,300	1.00	D	100	7,400	1.01	D	200	100
BART	Transbay	14,700	1.47	E	200	27,900	1.42	E	300	100
BART	West Bay	6,800	0.92	C	100	10,100	1.06	D	200	100
AC Transit	Bay Bridge	7,800	0.85	C	few	10,500	1.08	D	100	100
GGT Bus	GG Bridge	3,800	0.69	B	100	8,500	0.91	C	100	few
GGT Ferry	S.F. Bay	900	0.64	B	few	1,500	0.38	A	few	few
Tiburon Fy	S.F. Bay	200	0.22	A	few	300	0.60	B	few	few
SamTrans	County Line	1,600	0.84	C	few	3,100	1.19	D	100	100
Caltrain	4th St. Stn.	2,700	0.57	B	few	4,900	0.79	C	few	few

1 Actual 1984/85 observed ridership as verified by each transit agency.
2 Ratio of number of passengers to the number of seats.
3 Appendix I gives a description of Level of Service designations for transit carriers. The Levels of Service range from A (least crowded) to E (most crowded conditions).
4 Represents outbound demand at the screenline for each transit agency generated only by uses at the specific sites identified for development potential under the Van Ness Avenue Plan (VNAP).
5 Estimates of patronage demand, passengers per seat ratios, and Level of Service, as shown in Table IV.E.2 of the Downtown Plan EIR (EE81.3), October 1984.

TABLE 10: OUTBOUND P.M. PEAK PERIOD TRANSIT RIDERSHIP, PASSENGERS PER SEAT RATIOS (P/S), AND LEVELS OF SERVICE (LOS) AT REGIONAL AND C-3 SCREENLINES

		1984				2000				1984-2000
TRANSIT AGENCY	SCREENLINE	TOTAL DEMAND[1]	P/S[2]	LOS[3]	ESTIMATED VNAP DEMAND[4]	TOTAL DEMAND[5]	P/S[5]	LOS[5]	ESTIMATED VNAP DEMAND[4]	CHANGE IN VNAP DEMAND
Muni	Northeast	13,200	1.21	D	400	15,500	0.95	C	700	300
Muni	Northwest	13,400	1.12	D	200	15,300	1.05	D	900	700
Muni	Southwest	21,000	1.12	D	200	28,700	1.29	E	200	few
Muni	Southeast	9,000	0.99	C	100	12,100	0.88	C	300	200
BART	Transbay	25,600	1.38	E	200	44,100	1.40	E	400	200
BART	West Bay	11,000	0.71	B	100	14,600	0.77	C	200	100
AC Transit	Bay Bridge	11,600	0.84	C	few	17,000	1.16	D	100	100
GGT Bus	GG Bridge	5,600	0.66	B	100	12,200	0.81	C	200	100
GGT Ferry	S.F. Bay	1,000	0.43	A	few	1,700	0.33	A	few	few
Tiburon Fy	S.F. Bay	300	0.21	A	few	500	1.00	C	few	few
SamTrans	County Line	1,900	0.73	B	few	4,500	1.15	D	100	100
Caltrain	4th St. Stn.	3,500	0.55	B	few	6,200	0.77	C	few	few

1 Actual 1984/85 observed ridership as verified by each transit agency.
2 Ratio of number of passengers to the number of seats.
3 Appendix I gives a description of Level of Service designations for transit carriers. The Levels of Service range from A (least crowded) to E (most crowded conditions).
4 Represents outbound demand at the screenline for each transit agency generated only by uses at the specific sites identified for development potential under the Van Ness Avenue Plan (VNAP).
5 Estimates of patronage demand, passengers per seat ratios, and Level of Service, as shown in Table IV.E.2 of the Downtown Plan EIR (EE81.3), October 1984.

Northwest Corridor. It is important to note that a portion of Muni demand in the Northwest corridor estimated to be generated by development potential under the Van Ness Avenue Plan are divided between inbound and outbound trips. Inbound trips are those made into the project area, including those made by workers in the C-3 districts who may reside on Van Ness Avenue. Outbound trips are those from the downtown districts that do not terminate in the project area, and new trips boarding at Van Ness Avenue, that would continue west of the Plan area across the Northwest screenline. As such, not all inbound and outbound trips related to development potential of the Plan would be on the system at the same time. While Tables 9 and 10 show a total demand on the Northwest screenline of 600 peak hour and 900 peak period trips generated by the VNAP, approximately 500 and 700 trips, respectively, would be inbound trips to the project area. These patrons would exit individual lines at Van Ness Avenue, and the rest of the peak hour and peak period riders would board at Van Ness Avenue and travel across the Northwest screenline into the Northwest quadrant.

The Downtown Plan EIR estimated that the passenger-per-seat ratio averaged across all 15 lines included in the Northwest Muni screenline would increase to 1.25 in the year 2000, compared to the 1984 condition of 1.23. Of the 15 lines, only nine have stops on Van Ness Avenue within or near the Plan area boundaries. These would thus be the lines most directly affected by transit demand from the Van Ness Avenue Plan. Overall, the nine Northwest screenline Muni lines have an existing (1984) p.m. peak period load factor (passenger-per-seat ratio) of 1.04 at Van Ness Avenue compared with a 1.18 average at their maximum load points.

Assuming that the relationship between load factor ratios of the 15 lines and those nine lines serving the project area remains constant in light of the capacity increases assumed in the analysis, it appears that sufficient capacity would exist during the p.m. peak period in the year 2000 on those nine lines to accommodate additional patronage generated by the Van Ness Avenue Plan development potential. However, it is impossible to accurately forecast passenger loadings and capacity increases on a line-by-line basis. It is probable that specific lines (such as the 31-Balboa, 38-Geary, 38L-Geary

Limited, 5-Fulton, and 21-Hayes) which are already at or close to capacity at Van Ness Avenue may reach or exceed capacity as a result of this additional demand. This would be particularly true during the p.m. peak hour, for the 5-Fulton, 31-Balboa, and 38L-Geary Limited.

Northeast/Southeast/Southwest Corridors. Development potential would have the greatest transit demand impact on the four crosstown lines along or immediately adjacent to the project area (19-Polk, 42-Downtown Loop, 47-Van Ness/Potrero, and 49-Van Ness/Mission). All four of these lines are included in the Downtown Plan EIR analysis of the Muni Northeast screenline (for their northbound travel direction), and all but the 49-Van Ness/Mission are included in the Downtown Plan EIR analysis of the Muni Southeast screenline (for their southbound travel direction). Southbound travel on the 49-Van Ness/Mission is included in the Muni Southwest screenline.

Nearly all of the year 2000 transit patronage assigned to the Muni Northeast screenline resulting from the Plan's development potential would travel on these four routes. The balance of the transit demand would likely travel on other routes to reach the northern section of the project area (north of Jackson Street).

In the northbound direction, Van Ness Avenue Plan development potential could add 200 passengers to these four lines during the p.m. peak hour, and about 300 passengers during the p.m. peak period.

Tables 9 and 10 show that ridership demand at the Northeast screenline would increase 19 percent during the p.m. peak hour and 17.4 percent during the p.m. peak period, between 1984 and 2000. Extrapolation of demand and passenger-per-seat ratios in Tables 9 and 10 indicates that capacity at the Northeast screenline would increase by 33 percent during the p.m. peak hour and 49.5 percent during the p.m. peak period. Applying these growth rates to the four lines most likely to be impacted by Van Ness Avenue Plan development potential, projected transit demand from the Plan could be accommodated. Assuming the projected additional capacities, the passenger-per-seat ratio for these four crosstown lines at the Northeast screenline would improve from the

existing 1.00 to 0.90 during the p.m. peak hour, and improve from the existing 1.00 to 0.80 during the p.m. peak period by the year 2000.

Similar to transit travel patterns in the Northeast corridor, nearly all of the year 2000 transit patronage generated by the VNAP assigned to the Muni Southeast and Southwest screenlines would also travel on the same four crosstown routes. This includes travel destined to and from the various quadrants of San Francisco, as well as transfer trips to and from regional lines serving suburban counties, and trips internal to the project area.

Additional southbound ridership on these lines to the Southeast and Southwest corridors in the year 2000 resulting from the Plan's development potential could amount to about 100 trips during the p.m. peak hour and 200 trips during the p.m. peak period between the two screenlines. Cumulative ridership demand (including that from the VNAP area) at the Southeast and Southwest screenlines during the p.m. peak period would increase about 34 percent and 37 percent respectively to the year 2000. Capacity increases during the p.m. peak hour are estimated to amount to 40.4 percent (Southeast) and 7.3 percent (Southwest). Capacity increases during the p.m. peak period are estimated at 50.5 percent (Southeast) and 18.7 percent (Southwest). Given the ratio of future transit demand to estimated capacity increases, these growth rates would result in a degradation of the passenger-per-seat ratio on the four crosstown lines during the p.m. peak hour (from the existing 0.96 to 1.05), and an improvement during the p.m. peak period (from 0.96 to 0.90) in the year 2000. Given Muni's standard of 1.25, there would be adequate capacity to accommodate projected transit demand from the VNAP in these corridors, although vehicles would be more crowded than existing conditions during peak hour.

Although development potential in the project area does not include a large amount of office floor area, most new office development would be subject to the Transit Development Impact Fee (TDIF) of five dollars per occupied square foot of floor area. The TDIF ordinance applies to all office development in the greater downtown area, extending through the west side of Van Ness Avenue. The monies collected are to be used to augment other funding

to improve transit service in the greater downtown area, in response to increased transit demand generated by increased office growth since the early 1980's.

PARKING IMPACTS

There are presently about 660 on-street parking spaces along Van Ness Avenue and on intersecting cross streets west of Van Ness Avenue along the depth of commercial properties fronting on Van Ness Avenue. About 480 additional on-street spaces are available on cross streets between Van Ness and Polk Street, and another 360 on-street parking spaces between Van Ness and Franklin Street, along properties not fronting on Van Ness Avenue. On-street parking was found to be occupied above capacity (108 percent) with considerable illegal parking in red curbside areas, white passenger zones, and driveways.

The project area also has about 2,100 off-street parking spaces. Approximately 1,180 of these spaces are available for general public use and average about 51 percent occupancy. The remainder of spaces are restricted to use by employees and/or customers only. Approximately 350 public off-street spaces and 100 employee/customer off-street spaces would be replaced with new development under the proposed plan.

Off-street parking for new development would generally be required under the proposed plan as follows:

Commercial Uses: 1 space per 500 sq.ft. of occupied floor area.
Residential Uses: Minimum 1 space per 4 units, up to 1 space per unit.

As an incentive for preservation of significant buildings identified for conversion from auto showrooms to office and support retail, the proposed Plan suggests that these buildings may be at least partially exempted from providing off-street parking required by the Planning Code. While such an exemption would be granted on an individual basis and predicated on the ability to mitigate site-specific parking impacts by other means, no

off-street parking is assumed in this analysis for the floor area in significant buildings identified for such conversion. Demand for parking, however, is calculated on the combined total of floor area in square feet for conversion of significant buildings and new commercial construction.

Assuming that occupied floor area is equal to 87 percent of gross floor area, about 1,200 new off-street parking spaces would be required for new commercial development. Under the flexible residential parking standard proposed, 2,189 new dwelling units would yield between 550 (at 1 space per 4 units) to 2,189 resident parking spaces. The total number of new off-street parking spaces, resulting from the proposed Plan's development potential would thus range between 1,750 and about 3,400 spaces.

The development potential of the proposed Plan could create a demand for approximately 750 long-term (commuter) commercial parking spaces and 350 short-term commercial parking spaces. Considered together with the potential loss of 350 existing parking spaces on the soft sites, effective total future parking demand could be about 1450 spaces. Given the potential 1200 new off-street spaces that could be provided on the soft sites, a potential deficit of about 250 spaces could result.

Assuming that auto ownership patterns for new project area residents are similar to those of recently constructed housing units in the greater downtown, an average of 0.76 autos per new household would be expected.[5] Thus, translating auto ownership patterns into resident parking demand for 2,189 new households, a need for 1,660 new resident vehicles could be generated.

For purposes of environmental analysis, residential parking demand was calculated using a residential parking standard of one space per four units, under which assumption there could be an unmet residential parking demand of about 1,110 spaces. However, with a residential parking standard of one space per unit, which is recommended in the Van Ness Avenue Plan (with provisions for relaxation of the standard if a lesser need can be demonstrated), there could be 530 parking spaces provided above the demand anticipated if current

auto ownership patterns continue. Thus, total parking demand for residential and commercial uses could exceed total new supply by as much as 1360 spaces, or total supply could exceed anticipated demand by about 280 spaces[6].

It is assumed that existing commercial and residential uses located on sites identified for development potential generate demand for parking which is currently accommodated on-street rather than on-site (except for seven sites that provide parking to the public). Parking demand created by new commercial and residential uses replacing such existing establishments in excess of that which would be accommodated by new off-street parking would also be partially accommodated on-street. Because this new on-street demand would be replacing existing demand, on-street parking conditions would likely be similar in the future to the existing setting. Unmet demand possibly could be absorbed by shared parking programs between commercial and residential uses (although such programs are less likely to be feasible in the Van Ness area because it is expected that many workers living in the area would not drive to work regularly). As with the development potential estimates themselves, it should be noted that the maximum unmet parking demand is theoretical and would not likely materialize in the "real world" setting. It is more likely that actual demand for parking would be relatively well balanced to the number of spaces actually provided both on- and off-street, similar to reduced parking demand experienced in the downtown as a result of limited parking availability. Increased reliance on transit and ridesharing for certain types of trips, not assumed in this analysis, could further reduce theoretical unmet demand for parking.

Truck Loading. Development potential under the Van Ness Avenue Plan would also generate demand for truck loading areas to serve new commercial development. The City Planning Code establishes off-street loading space requirements in Section 152. Based on the development potential identified for individual soft sites in the project area, most sites would be subject to providing one freight loading space to serve the projected retail floor area. The limited amount of potential office floor area would not be expected to trigger further loading requirements of the Planning Code. Depending on the type and mix of commercial tenants that occupy floor area in the Plan area in

the future, off-street loading facilities may not be sufficient to accommodate all loading demand. In the event that such excess demand is exhibited, other measures, such as yellow on-street loading zones or on-street metered truck loading spaces, could be considered to address the demand.

The Van Ness Avenue Plan encourages the siting of loading areas on service alleys or minor intersecting streets, in order to minimize interference with vehicle flow and pedestrian circulation along the Avenue.

PEDESTRIAN IMPACTS

Travel within the area under the proposed Plan would include substantial increases in walking activity, associated primarily with residential and retail development potential. While it is not known what percentage of new Van Ness Avenue residents would also work within the project area, it is assumed that most commute trips by these resident-workers would be made by walking. Other pedestrian trips generated by the development potential would reflect other non-home-based work trips and home-based resident trips such as shopping, meals, recreation and visiting. Most of these trips would spread fairly evenly throughout the day and would be internal to the project area, although many could spill over to the adjacent Polk Street commercial area. The Plan's development potential could generate an estimated 4,200 daily pedestrian trips. Approximately 700 and 800 trips would be expected during the p.m. peak hour and peak period, respectively.

Analysis of additional pedestrian trips on an individual blockface level is not possible with any degree of confidence until key or "anchor" land uses are established which could provide a better sense of trip linkages and directions of movement. Given the 30 block faces along Van Ness Avenue that contain potential development sites, peak hour and period pedestrian trips per block could increase by about 25 if they were evenly dispersed. Generally, except at intersections, pedestrian access improvements proposed in the Plan (such as reduction of existing sidewalk obstacles by new development, relocation and consolidation of bus stops, and separating major pedestrian entrances to commercial and residential uses on different street frontages)

would be expected to accommodate increased pedestrian circulation for the development potential, resulting in unimpeded to impeded midblock sidewalk conditions[7].

It is clear that increased pedestrian travel resulting from the proposed Plan's development potential would result in higher volumes of pedestrians crossing both Van Ness Avenue and intersecting cross streets, at intersection crosswalks. If pedestrian increases are concentrated in certain areas, congested or crowded sidewalk conditions could result at specific corners. This condition could be aggravated by transit passengers queuing, embarking, and disembarking at bus stops located near intersections rather than at midblock. Existing traffic signalization along Van Ness Avenue generally provides 60-second cycles at cross streets during most times of the day and 90-second cycles north of Clay Street during peak periods. Signal cycles, particularly during the peak period, favor northbound and southbound Van Ness Avenue traffic, such that combined green and yellow signal phases for cross street pedestrian and vehicle movements is generally less than 50 percent of total cycle time. Thus, the resultant green and yellow signal times for most periods of the day (approximately 30 seconds maximum) is barely sufficient to allow safe pedestrian crossing of Van Ness Avenue throughout much of the project area. No pedestrian signals, which would indicate "Walk" and "Don't Walk" periods, are currently provided at any Van Ness Avenue intersection.

With existing traffic signal timing, increased traffic delays would result from higher volumes of pedestrians crossing Van Ness Avenue. This would affect turning movements by motorists, both from and onto Van Ness Avenue as well as through traffic on Van Ness Avenue itself, as pedestrians attempt to clear crosswalks after Van Ness Avenue signals have changed from red to green.

SUMMARY OF RECENT TRANSPORTATION INFORMATION AND TRENDS

As stated earlier, this EIR incorporates by reference the analysis of cumulative impacts published in the Downtown Plan EIR (EE81.5, certified October 18, 1984). The work for the Downtown Plan EIR was done based on the most recent city-wide employment data available in 1981. Surveys, interviews,

and other analyses were conducted in 1981 and 1982 to establish an estimate of downtown (C-3) district employment in 1981. The Downtown Plan EIR employment forecasts for 1990 and 2000 were prepared based on an economic analysis, which utilized the 1981 employment data as its base. Many of the tables in the Downtown Plan EIR present estimates for the year 1984; these are simple extrapolations of the forecasted growth between 1981 and 1990.

The Department of City Planning now has city-wide employment data for 1984 and 1985. With analysis of recent trends in employment and space use, consultants were able to develop estimates of employment in the greater downtown (including the C-3 districts) for 1985. These analyses indicate that the short-term C-3 district growth from 1981 to 1984 presented in the DTPEIR did not occur.

In summary, employment in the greater downtown area, including the C-3 district, declined with overall changes in city-wide employment. The pattern of change varies by both business activity and area of the greater downtown. There was a net decline of office workers which was partially offset by growth in other sectors, primarily retail and hotel acitivity. Much of the decline in office activity was attributed to relocations of "back-office" space to other parts of the city and region; effects of the recession in the early 1980's; and corporate mergers and acquisitions.

In addition to the decline in employment, other changes in conditions have been reported since certification of the Downtown Plan EIR which should be considered in the context of the long-term forecasts prepared for the cumulative analysis. Over the past several months, additional data has been released by transportation agencies for review and informational purposes. BART ridership declined following a fare increase in January 1986; Bay Bridge p.m. peak traffic increased between 1982 and spring 1986; and Golden Gate and AC Transit have announced a reduction in service due to ridership declines and related income losses. The Golden Gate Transit situation may change in the near future, however, as a ballot measure is planned to request a sales tax increase in Marin/Sonoma counties by one-half cent for transit purposes, similar to the other Bay Area counties.

The Bay Bridge traffic volume increases were recorded by the Metropolitan Transportation Commission through Spring 1986. Increases were observed in both eastbound and westbound directions during the p.m. peak period. Volumes in the eastbound direction actually exceeded design capacity of 9000 vehicles per hour. This could be due to changes in driver behavior (e.g. drivers are driving faster and closer together), and acceptance of higher congestion levels than were factored into Caltrans' definition of capacity. At the same time, BART ridership and AC Transit declined. Thus, service levels on these two systems improved, while bridge traffic increased.

Transportation experts have advanced several reasons for the shifts in travel modes. Increased driving is probably due in part to the drop in gasoline prices, particularly for drivers travelling longer distances who would be most discouraged from considering transit as an alternative. At the same time, BART fares increased by 30%, adding to the economic incentive. Some of the drop in transit patronage and westbound Bay Bridge traffic increases is also likely to be attributable to the drop in employment in downtown San Francisco, and shifts of employment to the East Bay between 1981-1985. BART average weekday patronage reached its lowest point in June 1986. It has been increasing since then, although levels have not yet returned to pre-fare increase levels. It is interesting to note that gasoline prices have also gradually increased since September 1986 although there is no statistical measure of correlation between ridership and fuel prices. There is also no new information on Bay Bridge travel since Spring 1986, so it is not known whether increases in BART patronage have been accompanied by decreases in Bridge traffic.

The drop in AC Transit transbay patronage is due in large part to an increase in "casual" and formal carpooling. Though its effects are more pronounced in the morning westbound direction, patronage has also declined in the evening eastbound direction. The cost advantages of money and time (no bridge toll or bus fare, usage of high-occupancy vehicle lanes, no waiting for buses or at the bridge toll plaza) make carpooling particularly attractive. It is likely that reduced BART ridership, particularly from Contra Costa stations, is also partially due to increased carpooling.

Transportation conditions are fluid and are subject to constant fluctuation due to circumstances that cannot always be detailed, but which affect travel behavior. Since transportation analyses evaluate a fixed set of circumstances, they cannot account for all possible changes in travel variables. Often such changes have a "push-pull" relationship over the short term, whereby they generate improved operating conditions on one part of the overall transportation system at the expense of the operating conditions of another part. As freeway congestion and fuel prices increase, the incentive will shift toward transit, and ridership will increase.

Due to the type and direction of the short-term changes that have been observed, there are no clear implications that enable conclusions to be drawn for the longer-term future. Current indications are that the decline in employment between 1981 and 1985 would tend to make the forecasts for year 2000 in the DTPEIR overly optimistic. However, fluctuations in transit ridership and traffic volumes are less predictable, and do not provide a basis for departing from the service assumptions in the Downtown Plan EIR analysis. Within the context of long-term forecasts and impact analyses, it should be anticipated that contrary short-term fluctuations will occur, which may or may not effect a change in a long-term timeframe. If there is a strong resurgence of ridership demand, it is likely that transit agencies would be able to increase service to meet it. It is not possible to account for all of these short-term changes in transportation mode in preparing a long-term analysis of cumulative transportation impacts resulting from employment growth.

Given that there are no clear implications that would change the long-term forecasts in the DTP EIR, its cumulative impact analysis still provides a reasonable scenario of potential impacts in year 2000 with which to evaluate the Van Ness Avenue Plan.

NOTES - TRANSPORTATION

1 The methodology utilized in projecting travel patterns for both C-3 and non C-3 growth is explained in full in Appendix J (Volume 2) of the Downtown Plan Environmental Impact Report (EE81.3), October 1984, which is hereby incorporated by reference.

2 Table 7 (P.M. Peak Cumulative Traffic Volumes) showing impacts at local intersections is based on a time delay analysis methodology, which is described in detail in Appendix I. Intersection service levels are determined according to the amount of time it takes to proceed through an intersection, rather than projecting ratios of vehicle demand to intersection capacity. This time delay methodology is preferable for analyzing a linear route such as Van Ness Avenue. This methodology, however, does not allow for a distinct set of service level projections to be calculated for the two hour peak period. It is expected, however, that the intersection levels of service projected in the peak hour would extend through the second hour of the peak period.

3 Downtown Plan Environmental Impact Report, Volume I, pp. IV.E.33-34; IV.E.36.

4 Transit capacity assumptions as discussed in Downtown Plan Environmental Impact Report, pages IV.E.24-26 and page J.26 of Appendix J (Volume 2) are hereby incorporated by reference.

5 This vehicle ownership rate was derived from a survey conducted by Recht Hausrath and Associates in May 1986. The population surveyed were residents of newer housing developments in the greater downtown area. Although it cannot be guaranteed that new residents on Van Ness Avenue would replicate this pattern, the survey data provides a reasonable possible demand factor for purposes of this analysis.

6 Parking demand calculations are included in Appendix I.

7 Pushkarev, Boris and Zupan, Jeffrey, Urban Space for Pedestrians, The MIT Press, Cambridge, MA, 1975, page 159. The different levels of pedestrian flow are presented in Appendix I.

F. AIR QUALITY IMPACTS

Upon completion, the project would affect air quality in two ways. Emissions would be generated by project-related traffic, and by combustion of natural gas for building space and water heating. Transportation sources would account for over 95% of project-related emissions.

Table 11 shows projected daily emissions of air pollutants in 2000 from traffic which would be generated by the project, projected daily emissions in 2000 for C-3 District development projected by the Downtown Plan EIR, and total emissions projected for the entire Bay Area by the Bay Area Air Quality Management District.[1]

TABLE 11:
PROJECTED DAILY POLLUTANT EMISSIONS

	Emissions (tons per day)[a]			
Pollutant	Project[b] 2000	Downtown Plan[c] 2000	S.F. County[d] 2000	Bay Area[d] 2000
Hydrocarbons	0.70	0.6	50.4	560
Nitrogen Oxides	0.88	0.8	49.2	492
Carbon Monoxide	6.76	6.6	217	2,170
Particulates	0.63	1.3	76	764
Sulfur Oxides	0.062	0.1	18	225

[a] Van Ness Plan and Downtown Plan emissions calculated using BAAQMD vehicular emission factors, which do not take the Inspection/Maintenance Program (discussed later in this section) into account. Emissions of HC, NOx, NOx, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust disturbed from roadway surfaces.

[b] Based upon a weighted daily average of 212,000 miles traveled.

[c] Incremental emissions of C-3 District development, per the Downtown Plan EIR, Vol. 1, Table IV. I.2, p. IV. I.12.

[d] Bay Area Air Quality Management District, Air Quality and Urban Development: Guidelines for Assessing Impacts of Projects and Plans, San Francisco, November 1985.

SOURCE: Environmental Science Associates, Inc., and the Dept. of City Planning

Carbon Monoxide (CO)

The California Legislature mandated a biennial inspection and maintenance (I/M) program which applies to most cars and light trucks in California. This program went into operation in March 1984. Vehicles covered by the legislation must undergo a check consisting of a visual inspection of the vehicle's emission control system, measurement of tailpipe emissions while the vehicle is idling and comparison of the measured emissions rates to allowable limits for the appropriate year of manufacture and model of vehicle. Vehicles must have the required emission control equipment and must meet the specified standards for hydrocarbons and carbon monoxide. If required emissions control equipment is not present it must be installed. If all required equipment is in place but the vehicle's emissions exceed the standards, the owner must pay a maximum of $50 for service intended to result in compliance.

An annual I/M program was evaluated in the 1982 Bay Area Air Quality Plan based on the 1979 source inventory. Based on a predicted 25% reduction in hydrocarbons and CO of the vehicles covered, a reduction in total motor vehicle-generated CO of about 18% would be expected. The reduction in total regional CO emissions would be about 16%. The reduction in motor vehicle-generated hydrocarbons would be about 17%; the reduction in total regional hydrocarbon emissions would be about 6%. Vehicle emission factors used in the model in the Downtown Plan EIR did not take the I/M program into account. To account for reductions from the I/M program, revised (lower) background CO concentrations for the year 2000 are incorporated into the air quality analysis model for this project.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic were projected for conservative conditions, and are compared with ambient standards in Table 12. Currently, the eight-hour CO standard is estimated to be violated along Van Ness Avenue. CO concentrations are predicted to be less in 2000 than in 1984 and would not violate one- or eight-hour standards at any intersection in this future scenario. In 2000 the average vehicle is expected to emit 43% less CO than in 1984 due to ongoing state and federal emissions controls.

TABLE 12

EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm)[1] Existing	2000[2]
Van Ness Ave./Turk St.	1 Hour	15.4	8.4
	8 Hour	12.2	6.7
Van Ness Ave./Sutter St.	1 Hour	14.6	7.9
	8 Hour	11.4	6.2
Van Ness Ave./Geary St.	1 Hour	15.4	8.4
	8 Hour	12.2	6.7
Van Ness Ave./Pine St.	1 Hour	16.3	8.8
	8 Hour	13.1	7.3
Van Ness Ave./Broadway	1 Hour	15.2	8.3
	8 Hour	12.2	6.8
Van Ness Ave./Lombard St.	1 Hour	16.4	9.0
	8 Hour	13.6	7.6

[1] All CO concentrations are expressed in parts per million (ppm). Calculations for all scenarios were made using the modified linear rollback methodology provided by the Bay Area Air Quality Management District (BAAQMD) as presented in the Downtown Plan EIR analysis (EE81.3, certified October 1984).

Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984, and 4.2 ppm for one hour and 3.0 ppm for eight hours in 2000. The 2000 concentrations factor in the effects of the ongoing statewide Inspection/Maintenance program.

The one-hour state CO standard is 20 ppm; the one-hour federal standard is 35 ppm. The eight-hour state and federal standards are 9 ppm. Underlined values represent violations of state and/or federal CO standards.

[2] Based on the growth forecast methodology in the Downtown Plan EIR (EE81.3, certified October 1984). Emissions generated by development potential under the Van Ness Avenue Plan would be contained within this forecast.

Ozone

Nitrogen oxides (NOx) and hydrocarbons (HC) are both chemical precursors of ozone. Motor vehicles emit more NOx than HC, and the emissions from building natural gas combustion would consist primarily of NOx. As demonstrated by the LIRAQ (Livermore Regional Air Quality model) regional ozone simulations conducted for the 1982 Bay Area Air Quality Plan, an increase in the future NOx emissions compared to HC emissions would lead to a decrease in ozone compared to present levels. This model had also shown that Bay Area ozone concentrations were expected to be within the federal standard in 1987, and thereafter. This prediction is now being restudied. As future NOx emissions from cumulative development in San Francisco would exceed future HC emissions, this development would not lead to an increase in total Bay Area ozone concentrations.

At the same time, total emissions of both NOx and HC are expected to decrease in San Francisco. Total NOx emissions would decrease in downtown San Francisco by about two percent from 1984 to 2000, but would increase in the Bay Area by about 5% from 1984 to 2000. It is possible that excess NOx emissions generated by cumulative development (including development potential under the Van Ness Area Plan) could increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. In addition, NOx emissions generated by cumulative development (including the Van Ness Area Plan) throughout the Bay Area could increase acid rain further downwind, outside the Bay Area. However, this potential would be relatively small due to the magnitude of the increase and to dilution over time and distance.

Total Suspended Particulates and SOx

Emissions of total suspended particulate (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase, which could increase the frequency of violations of the TSP standard in San Francisco, with concomitant health effects and reduced visibility.[2] TSP impacts generated by construction-related activities can be partially mitigated by sprinkling sites with water or other dust palliative

during demolition and construction phases and other measures which could be implemented on a case-by-case basis.

Emissions of sulfur oxides (SOx) generated by the project and cumulative development would not bring San Francisco's sulfur dioxide (SO_2) concentrations measurably closer to violating the standard.

Relationship to Bay Area Air Quality Plan

The 1982 Bay Area Air Quality Plan contains strategies which consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. As discussed above, emissions associated with development potential under the Van Ness Avenue Plan and with cumulative development under the Downtown Plan are not projected by this EIR or the Downtown Plan EIR to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone. Cumulative downtown development had been projected by the Downtown Plan EIR potentially to result in a violation of the eight-hour CO standard at the Brannan/Sixth Street intersection as analyzed therein. Based on the emission factors which account for the I/M Program as revised since the modified linear rollback contained in the Downtown Plan EIR, the city no longer predicts violations of CO standards at the Sixth and Brannan intersection, or other intersections which have been modeled in the greater downtown. Based on the above, cumulative greater downtown development would not conflict with objectives of the 1982 Bay Area Air Quality Plan regarding CO.

NOTES - Air Quality

1 Impacts anticipated from cumulative downtown development have been analyzed in the Downtown Plan Environmental Impact Report (EIR), EE81.3, certified October 18, 1984. The air quality setting and impacts discussion in the Downtown Plan EIR (Vol. 1, pp. IV. I. 1-19; Vol. 2, pp. 0.1-9; Vol. 3, Part 1, pp. C&R-I. 1-11) is summarized in the text of this EIR and incorporated by reference herein.

2 State particulate standards were changed in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. The previous state and federal particulate standards were 100 micrograms per cubic meter (ug/m^3) and 260 ug/m^3 of particulates, respectively. The present state and federal PM-10 standards are 50 ug/m^3 and 150 ug/m^3, respectively, of fine particulate matter. Although both the previous and present particulate standards are measured in ug/m^3, under the PM-10 standards only those particulates 10 micrometers or less in size are measured. The BAAQMD has stated that PM-10 comprises about 50-60% of particulates as previously measured. Thus, the new standards are generally equivalent to the previous standards. BAAQMD is presently monitoring PM-10 at seven Bay Area monitoring stations, including the 16th and Arkansas station in San Francisco. Data from the San Francisco station from April 1986 to September 1986 are available. Once 12 months of data are available it will be possible to assess whether specific violations of the PM-10 standard have occurred.

G. NOISE IMPACTS

San Francisco guidelines for the compatibility of various land uses with different noise environments (Environmental Protection Element of the San Francisco Comprehensive Plan, page 19) were adopted by City Planning Commission Resolution No. 7244, September 19, 1974. Table 13, below, identifies the noise level criteria in the Master Plan for land uses proposed in the Van Ness Avenue Plan. The recommended noise levels for land uses are general guidelines, not absolute limits. In the July 1974 study, Noise in San Francisco, which was the source document for Master Plan noise policies, it is recognized that "specific local situations, attitudes and conditions concerning the environment may well result in noise levels that are considered

TABLE 13

LAND USE COMPATABILITY REQUIREMENTS* FOR COMMUNITY NOISE LEVELS

NOISE LEVELS, L_{dn}, IN dBA

LAND USE	UP TO 60	65	70	75	80	85
Residential	A	B,C	B,C	C	C	
Parks, Open Space	A	A	A,C	C	D	
Office	A	A,B	A,B	B,C	C	C
Commercial Retail	A	A	A,B	B	B,C	C

* The Element shows overlapping ranges of noise levels for requirements

REQUIREMENTS

A: Satisfactory, with no special noise insulation requirements.

B: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

C: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

D: New construction or development should generally not be undertaken.

SOURCE: Environmental Protection Element of the San Francisco Master Plan

acceptable although higher or lower than those shown."[1] Because there are no absolute standards available, they are intended to guide the decision-making process, which must consider technical acoustical data together with socio-economic factors and construction techniques that can mitigate existing, or avoid generating, undesirable conditions.

In addition to the Environmental Protection Element, Title 24 of the California Administrative Code states that for dwellings other than single-family detached units, such as hotels, apartments and condominiums, "Interior community noise equivalent levels (CNEL)[2] with windows closed, attributable to exterior sources shall not exceed a CNEL of 45 dB in any habitable room."

As stated in the Noise Setting, the average day-night noise level (L_{dn}) for Van Ness Avenue is about 80 dBA[3]. The severity of noise impacts on workers and residents occupying buildings in the Plan area would vary according to their relative height above the Avenue. Given the relatively high background noise levels, new residential, office and commercial projects would have to undergo site-specific evaluation under Title 24 at the time of application for building permits to determine which noise reduction insulation features would be necessary to avoid adverse noise levels.

Residential development occurring within the Plan Area but not fronting directly on Van Ness Avenue would likely experience less noise impacts than those facing directly onto the Avenue.

Development potential under the proposed Plan could permanently affect the existing acoustic environment in the area in two ways: by generating additional traffic in the vicinity, therefore contributing to an increase in overall traffic noise levels; and by adding mechanical equipment to the area. Temporary effects on the acoustic environment would be caused by sounds of mechanical equipment associated with construction.

Traffic generated by the development potential of the Plan would not likely cause a significant impact on noise levels in the vicinity. To produce

a noticeable increase in environmental noise, a doubling of existing traffic volume would be required.[4] The projected cumulative increase in traffic on Van Ness Avenue of approximately 12% would generate an increase in noise of less than 1 dB, which is not noticeable to the human ear.

San Francisco's noise ordinance limits the amount of noise mechanical equipment can emit throughout day and nighttime hours. The ordinance requires that noise from mechanical equipment in high density residential districts not exceed 60 dBA between 7 a.m. and 10 a.m. and 55 dBA between 10 p.m. and 7 a.m. This level would be below the existing background noise level in the vicinity of the site. As such, no perceptible increase in noise levels due to mechanical equipment would be expected.

Construction Noise Impacts

Construction noise in San Francisco is also regulated by the noise ordinance. The ordinance requires that all powered construction equipment except impact tools and equipment not emit more than 80 dBA when measured at a distance of 100 feet. Impact tools and equipment including pavement breakers, jackhammers and pile drivers must have their intake and exhaust muffled to the satisfaction of the Director of Public Works (DPW). DPW may specify certain conditions, such as predrilling pile holes, using relatively quiet equipment, and denoting specific hours of operation in order to reduce the number of people exposed to noise effects. The ordinance further requires a special permit for construction after 8:00 P.M. and before 7:00 A.M.

Construction of specific buildings under the proposed Plan would take place in three phases: excavation, foundation construction, and building erection. Construction noise levels would fluctuate measurably among the phases. The worst-case noise impacts associated with the various phases of construction have been estimated for this study.

During excavation, bulldozers, graders, haul trucks and front end loaders would be expected to generate from 64-79 dBA at 100 feet. During foundation construction, the major source would be pile driving, during which noise

levels up to approximately 105 dBA at 50 feet could be expected. After the pile driving phase, concrete pumpers, power saws, cranes, air compressors, engine generators and impact torque wrenches would be the major sources, emitting from 70 to 95 dBA at 50 feet. These levels have been measured at construction projects in downtown San Francisco. Interior noise levels at 50 ft. from the noise source would be reduced by about 10 to 15 dBA with windows open, and about 20 to 25 dBA with windows closed.

The Plan area is surrounded by residential as well as commercial development. It is expected that the noise from pile driving, the noisiest phase of construction operation, would be annoying and distracting to residents and workers. The use of pile drivers and impact wrenches would interfere with conversation.

It is improbable that construction of all sites within the project area would occur at once. It is therefore also improbable that each site-specific project would be in the same stage of construction at the same time. However, if the Plan and rezoning generate the anticipated amount of development, some construction noise effects would occur at some location along the Avenue much of the time between adoption of the Plan and the year 2000. Actual cumulative noise impacts on a given receptor would depend upon the phasing of each project and the location of the receptor in relation to each of the other projects.

NOTES - NOISE:

1 Bolt Baranek and Newman. "Noise in San Francisco," July 1974, p.22

2 CNEL, or Community Noise Equivalent Level, is an index based on a 24-hour average of the energy content of the noise, with a 5-dBA "penalty" added for evening noise (7:00 p.m. to 10:00 p.m.) and a 10-dBA penalty added for nighttime noise (10:00 p.m. to 7:00 a.m.), to account for the greater sensitivity to noise during these periods. CNEL is similar to Ldn (day-night average noise level), which does not include a weighting for evening noise (7:00 p.m. to 10:00 p.m.)

3 Environmental noise in measured in units of dBA. The dBA, or A-weighted decibel level, refers to a scale of noise measurement which approximates the range of sensitivity of the human ear to sounds of different

frequencies. The Environmental Protection Element of the Comprehensive Plan classifies various noise levels (expressed as Ldn; see above) according to the following scale: 30 dBA, very quiet; 45 dBA, quiet; 70 dBA, loud; 95 dBA, very loud; and 120 DBA, painfully loud. A 10-dB increase in the level of a continuous noise represents a perceived doubling of loudness; a 2 dB increase is barely noticeable to most people. Hearing damage occurs at a level of 90 dB over an eight-hour period.

4 Doubling of traffic volumes may produce increases of 3 dBA or more. Less than a 3 dBA increase is normally not noticeable to the human ear outside laboratory conditions. For more, refer to Federal Highway Administration FHWA Highway Traffic Noise Prediction Model, Rpt. # FWHA-RD-77-108, December 1978, p.8.

H. ENERGY IMPACTS

Pacific Gas and Electric Company supplies energy to San Francisco customers. Electrical energy is generated from various sources including oil, gas, hydroelectric, geothermal, nuclear, wind, cogeneration and solid waste.[1] In future years PG&E expects to generate electricity from these sources and from coal. The proportion of energy generated from oil and gas is expected to decrease by 1990 with corresponding increases in the proportion of energy generated from other sources listed above.

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the California Administrative Code. The State allows developers to comply with the standards through the component performance standards method which requires the incorporation into a building of a set of specific design features, through the use of nondepletable energy resources, or by demonstrating that the building would consume no more than a specified quantity of energy, expressed as Btu's per square foot per year (energy budget).[2] Documentation showing compliance with these standards is submitted with the application for the building permit and the standards are enforced by the Bureau of Building Inspection.

Table 14 (next page) shows existing energy demand and estimated total operational energy demand under the Plan in year 2000. Annual electricity demand of the Van Ness Avenue Plan development potential alone would be about 24 million kWh. About 65% of the demand would be generated by commercial uses, a relatively high proportion given the ratio of commercial floor area to residential floor area. Total projected development in the Van Ness Avenue Plan area would consume approximately 48 million kWh per year. Most commercial electricity would be used for lighting, air conditioning and equipment operation. Peak commercial demand would occur on warm weekday afternoons in August or September when air conditioning demand is highest. By contrast, residential electricity demand in San Francisco tends to be lowest during the summer months, and experience peak conditions in January. Overall peak electricty consumption estimated from total development in the project area is estimated to reach 372,000 kWh per day. At a city-wide level,

TABLE 14

ESTIMATED VAN NESS AVENUE PLAN ENERGY CONSUMPTION

IN RELATION TO CITY AND REGIONAL DEMAND

Parameter	VNAP Area 1984/85[a]	VNAP Area 2000[b]	San Francisco Region 2000[c]	2000[c]
Electricity (Billion kWh/Yr.)	0.044	0.048	5.0	113
Natural Gas (Billion cu.ft./Yr.)	0.391	0.595	35	600

NOTES:

[a] Consumption factors used in deriving total energy demand estimates are based on analysis in the Downtown Plan EIR Volume 2, Appendix N (EE81.3, certified October 1984). Detailed energy calculations for the Van Ness Avenue Plan are available for public review at the Office of Environmental Review, 450 McAllister Street, 6th Floor, San Francisco 94102.

[b] The estimated energy requirement of development potential under the Van Ness Avenue Plan has not been adjusted for energy consumed by land uses that would be displaced by the development potential under the Plan. These figures thus tend to overestimate future energy demand.

[c] Projected energy requirements for San Francisco and the Bay Area region are based on the Downtown Plan EIR analysis, Vol. I, p. IV.G.12.

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however, annual peak demand for electricity occurs in the summer months, which coincides with PG&E's system-wide peak.

Most demand for natural gas would be generated by the residential component projected in the Van Ness Avenue soft site analysis. The demand generated by development potential on the Avenue is estimated to be about 204 million cubic feet of natural gas per year, of which about 93% would be attributable to residential consumption. Natural gas is used primarily for space and water heating. Estimated annual demand for natural gas from total development in the project area in 2000 would be 595 million cubic feet. Demand typically peaks on January mornings as natural-gas fired boilers begin heating buildings. Estimated peak demand from the Van Ness Avenue Plan

development potential would be 838,000 cubic feet per day; demand generated by total development in the project area could reach 2.5 million cubic feet per day.

The natural gas and electricity required for the development potential under the Plan in year 2000 would be about 469 billion BTU per year, equivalent to about 84,000 barrels of oil per year, or approximately 170,500 BTU per square foot of development per year. Total development in the Van Ness Plan study area, including existing development, would result in an estimated annual energy requirement of 1.130 trillion BTU, or approximately 241,000 barrels of oil per year equivalent.

San Francisco's electricity requirements would be about 5.0 billion kWh per year by 2000, about a 32% increase from 1984. Peak demand for the city would be about 1,000 MW, a 30% increase in 16 years. Demand in 2000 would exceed the local capacity of 792 MW provided by the Hunters Point and Potrero power plants. About 35 billion cu. ft. of natural gas would be consumed in the city annually by 2000.

Development in San Francisco would contribute to increased demand for electricity and natural gas within the PG&E service area. An analysis of potential impacts on PG&E system-wide is contained in the Downtown Plan EIR, which is incorporated by reference.[3] In essence, San Francisco would account for about four percent of PG&E's system-wide energy consumption in 2000. PG&E expects that about 113 billion kWh of electricity will be consumed in their service area by 2000, a 28% increase from 1984, which would be provided through a wide range of energy facilities.

PG&E expects peak system-wide electrical demand to increase 45% between 1984 and 2000 to about 23,000 MW. To meet new demand, PG&E plans to increase system capacity by about 35% while allowing its reserve margin to decline from about 23% to about 15%. PG&E's electrical capacity in 2000 is planned to be about 27,000 MW.

Natural gas consumption in the PG&E service area, at about 600 billion cu. ft. per year, is not expected to change substantially between 1984 and 2000. PG&E plans to continue receiving most of its natural gas from Canada and from Texas under long-term contracts.

Energy Requirements for Transportation: Electricity, gasoline, and diesel fuel is consumed in providing transportation. The total energy requirement for this travel depends upon the total passenger-miles provided by each mode of travel and the energy efficiency of each mode. Generally, buses, trains, and other mass transit are more energy-efficient per passenger-mile than automobiles. Thus, a shift of trips from automobiles to public transit would increase average transportation energy efficiency.

Table 15 (next page) presents estimates of energy consumption related to transportation demand associated with development in the Van Ness Avenue Plan area. Between 1984 and 2000, miles travelled by vehicles would increase. However, average gasoline efficiency is also expected to increase between 1990 and 2000, thus resulting in a decrease in potential gasoline consumption.

Changes in numbers and modes of trips by year 2000 as analyzed in the Downtown Plan EIR would increase total cumulative transportation energy requirements. However, due to mode shifts from individual vehicles to ride sharing and transit, overall transportation energy efficiency would increase.

TABLE 15
TRANSPORTATION ENERGY CONSUMPTION RELATED TO DEVELOPMENT
UNDER THE VAN NESS AVENUE PLAN[a]

Parameter	1984	2000
Electricity (Million kWh per year)	220[b]	320[b]
Gasoline (Million gallons per year)	2.63[c]	2.51[c]
Diesel Fuel (Million gallons per year)	6.8[b]	8.3[b]

NOTES TO TABLE 15:

a Assumptions and calculations are available for public review at the Office of Environmental Review, 450 McAllister Street, 6th Floor, San Francisco.

b These figures represent projected consumption of entire transit systems as analyzed in the Downtown Plan EIR analysis; of which development in the Van Ness Plan area would contribute a relatively small proportion. Electricity consumption is based on demand from BART and MUNI electrified lines; diesel consumption is based on demand generated by bus fleets of regional transit systems and Caltrain Peninsula service.

c Gasoline consumption estimates are based on vehicle miles travelled in the Van Ness Avenue Plan area only.

I. GEOLOGIC/SEISMIC IMPACTS

Development which could occur under the Van Ness Avenue Plan could introduce a resident population of approximately 3,200 and about 1,100 employees into the Van Ness study area. This population would be exposed to seismic risk, some degree of which is present in the entire San Francisco Bay region. The nature of the risk for this population and the potential new structures is discussed below. The relative change in risk is unknown because it is dependent on seismic conditions at alternative locations where similar increases in population and employment could be accommodated in the city and/or region if projected development did not occur in the Van Ness area.

Most of the additional population and employment would occupy new buildings constructed to comply at least with the standards of the 1979 Uniform Building Code (with seismic amendments) which were adopted in the San Francisco Building Code in 1984. These Codes are designed to confine earthquake damage to the following levels: 1) in a small earthquake (approximately Richter magnitude 4.5 or less), no structural or non-structural (cladding, windows, etc.) damage would occur; 2) in a moderate earthquake (approximately Richter magnitude 4.5-7.0) extensive non-structural damage would occur, but little or no structural damage would occur; 3) in a major earthquake (Richter magnitude 7.0 to 8.3, the largest expected earthquake on the San Andreas Fault), structural damage would occur but there would be no loss of life due to this damage. The third level of damage allows for design and construction of buildings from which considerable amounts of cladding and glass could fall to the streets. This falling debris could result in injury or death to pedestrians on the streets below.[1]

Setbacks anticipated to be required in new buildings under the Van Ness Avenue Plan could lessen the amount of falling glass reaching sidewalks and streets; instead some proportion of falling glass might be intercepted by setback areas above street level. Buildings under construction would face particular danger due to the unfinished state of fire insulation and unsecured materials above ground level.

Under the Van Ness Avenue Plan, designated significant buildings would be encouraged for preservation and re-use. These buildings were constructed prior to imposition of seismic requirements of the Building Code and are expected to be more susceptible to ground shaking impacts than new construction in the event of an earthquake. Wood frame buildings, such as the residential structures proposed for preservation, generally withstand ground shaking better than masonry or concrete buildings. Conversion of proposed significant auto showrooms to office and/or retail use, as permitted under the Plan, may trigger building alterations to meet stricter Building Code provisions, including increases in number and size of building exits and entrances, sanitary facilities, and fire construction standards. An increase in a building's "live occupancy" (number of people) of 10 or more above the maximum occupancy set by the applicable occupancy standard of the Building Code would trigger seismic upgrade.[2] Standards for upgrade are less restrictive than current Building Code requirements for new construction. They would, however, provide increased protection against impacts due to ground shaking. The upgrade standards are subject to change to provide a higher degree of protection in the near future, probably linked to upgraded standards of the Uniform Building Code.[3]

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[1] San Francisco Department of City Planning, Downtown Plan Environmental Impact Report, EE81.3, certified November, 1985, p. IV.K.11.

[2] San Francisco Building Code, Sections 104 and 502.

[3] William Schock, San Francisco Bureau of Building Inspection, June 25, 1987.

V. MITIGATION MEASURES

The proposed Van Ness Avenue Plan establishes policies and objectives which, with implementing zoning, would govern future development along most of Van Ness Avenue. From a citywide perspective, the Plan is intended to provide housing to alleviate demand for housing expected to be generated by continuing future development and job growth, especially in the downtown area. At the same time, it would limit office development in the Van Ness corridor, which could otherwise contribute to further housing demand. As such, the Plan is allied with mitigation measures identified in the Downtown Plan EIR to address jobs/housing balance relationships and can therefore be considered mitigative in intent. To the extent that downtown workers choose to reside in Van Ness Avenue housing, transportation and air quality impacts could be reduced over those that would occur if workers commuted over further distances, from locations without the public transit service available in the Plan area. Locating downtown workers in the 2,000+ housing units which could be built under the Plan would enable increased use of local transit, pedestrian, and bicycle transportation modes, which are the most efficient means of circulation in the greater downtown.

The area of Van Ness Avenue between McAllister Street and Broadway has been recognized in the Housing Element of the San Francisco Master Plan as one of the few areas of the city where new housing can be accommodated with relatively small impacts on existing residential neighborhoods and public services. Development of the type and extent proposed by the Plan on Van Ness Avenue could add over 2,000 housing units to the city's stock in an underdeveloped and changing area of the city that is well-served by public transit. Addition of this amount of housing in other locations in the city would be more incremental and likely generate greater environmental effects, particularly involving issues of traffic, transit, parking, urban design and scale, public services, land use, population, and noise.

The Van Ness Avenue Plan and rezoning proposal is inherently different from a specific development project. Unlike a development project, policies and zoning controls are not irreversible once they are adopted. If

environmental problems arise due to application of the policies or zoning controls, or if unforeseen problems or issues begin to emerge in the Plan area or its larger context, policies and zoning controls can be modified relatively easily to help resolve such problems or issues.

Environmental considerations were taken into account in the process which led to the Plan as proposed by the Department of City Planning. As such, many specific policies of the Plan and concomitant zoning requirements are designed to mitigate many impacts which could otherwise occur. The conditional use process, mandated through the proposed Plan and zoning for most development proposals, could be used to deny proposals which would generate adverse impacts or to impose conditions of approval to mitigate the adverse impacts. Also, specific development projects which may be proposed under the Plan that exceed thresholds set by the California Environmental Quality Act would be subject to environmental review on an individual, site-specific basis. At such time, detailed evaluation and disclosure of potential environmental impacts would be carried out, and, if significant impacts are revealed, the opportunity for review of alternatives and imposition of mitigation measures would occur through the public hearing process.

Notwithstanding the above considerations, development which could occur under the Plan would have some impacts, particularly in combination with cumulative projected downtown and citywide development. These impacts are noted in Section VI (Significant Environmental Effects that Cannot be Avoided if the Proposed Project is Implemented). The mitigating measures contained in the proposed Plan are identified below by subject and would have to be considered by the City Planning Commission as part of the Master Plan policies in reviewing conditional use applications for development. Any or all of them could be justified as conditions of project approval. Other measures that would address impacts of the proposed plan but are not included in the Plan are identified below as measures for consideration.

A. Land Use Mitigation

Measures Incorporated into the Proposed Plan

In designating Van Ness Avenue between McAllister Street and Broadway for high-density residential development, the Plan recognizes certain conditions which render the area appropriate for the proposed land use. These include proximity to the city's major employment center (the greater downtown/Civic Center area); extensive public transit service; well-developed infrastructure; wide roadway and sidewalks; availability of commercial businesses and services; and presence of minor streets, which facilitate access to and from new developments with minimal conflicts with major east-west thoroughfares or Van Ness Avenue. This match between conditions and proposed land uses should help to minimize land use impacts inherent in adding new development.

For the area between Broadway and Bay Street, the Plan's policies call for preservation of the existing housing stock along with carefully designed, medium density infill housing development to maintain the scale and density of this existing residential neighborhood. These policies and implementing RC-3 zoning (reclassification from the existing, less restrictive C-2 district) would minimize land use effects in this area.

The Plan calls for enhancement of the area north of Bay Street as an attractive gateway to the Avenue and transition from Fisherman's Wharf and Golden Gate National Recreation Area. Land use changes under the Plan would be minimal in this area and would be mitigative of existing problems. For example, the Plan supports replacement of excessive paved areas with landscaping to enhance the open space resources of the area.

Required public review for most new development. Conditional use approval by the City Planning Commission would be required for any new building or addition exceeding 40 feet in height and for the demolition of any existing housing.. In considering any application in the Van Ness area under Section 303 of the City Planning Code, the City Planning Commission would consider conformity to the Van Ness Area Plan, a part of the Master Plan. This

mitigation is built into the proposed Plan to assure that all site-specific development be reviewed with adequate public input before the Planning Commission to prevent projects from being approved which might have possible adverse effects or otherwise not be in conformity with the Master Plan.

B. Visual and Urban Design Mitigation

Measures Incorporated into the Proposed Plan

The proposed Plan and zoning legislation would reduce height limits between California Street and Pacific Avenue from 130' to 80' to facilitate the transition to lower building heights toward the north.

The Plan includes new height and bulk controls which have been established to meet the criteria of the Urban Design Element of the Comprehensive Plan. The new height districts are premised on the following design principles: (1) new development should incorporate setbacks as necessary to maintain the present streetwall as defined by a number of architecturally significant buildings; (2) towers should be separated and be varied in height in order to avoid visually lining up or benching at a single level; (3) new buildings should be designed to form a harmonious extension of adjacent architecturally significant buildings in terms of facade design and building height and bulk.

The Plan contains new bulk controls intended to make the tops of buildings slender, their silhouettes stepped and tapered. In response, conditional use review for any new tower proposed for construction along Van Ness Avenue would be reviewed against the bulk criteria contained within the Plan.

Planning Code amendments proposed to implement the Plan would establish special sign controls for Van Ness Avenue to minimize the aesthetic and nuisance effects of signs on present and future residents of the Avenue while recognizing the need for effective commercial signage.

Shadowing effects on Van Ness Avenue would be reduced due to the proposed height limits (80' and 130') and floor area ratios (4.5 to 1 and 7.0 to 1),

which, taken together, effectively mandate setbacks for new structures above 50 feet in height.

The Plan proposes adoption of a uniform landscape/greenspace plan which would enhance the visual quality of Van Ness Avenue. In addition, Plan policies implementable through the conditional use process would also encourage developers to provide pedestrian amenities such as plazas, places to sit, planting areas, fountains or cafes. Extensive landscaping on public as well as private areas would be encouraged.

To minimize wind impacts, a wind tunnel analysis must be prepared for all development proposals requiring conditional use review to determine impacts of the individual building design. Buildings that generate wind acceleration of 7 miles per hour in seating areas or 11 miles per hour along pedestrian walkways (sidewalks) would incorporate design revisions or other measures to reduce wind acceleration below these levels to maintain human comfort.

Measures for Consideration

A shadow analysis could be required for every new structure to be built within the study area. The results of this analysis could be an integral part of the design review and could aid in modifying project design to keep new shadows on the Avenue or on new open spaces created by new development at a minimum.

C. Population, Housing and Employment Mitigation

Measures Incorporated into the Proposed Plan

Protection of existing housing. The proposed Plan would address the issue of provision and retention of existing housing by requiring conditional use review by the City Planning Commission of any housing demolition or conversion proposals. Specific Plan policies, upon which conditional use decisions would be based, call for conservation of existing rental housing wherever possible.

Maximization of new housing opportunities. Regarding new construction, the Plan would allow broad design flexibility as to unit size, allowing the creation of smaller, affordable units. The Plan would relax existing parking requirements if there is a demonstrated lower parking demand for a particular development project, which would lower the per unit costs. However, given land and construction costs it is unlikely that low and moderate cost housing would be built on Van Ness Avenue without some kind of subsidy.

D. Cultural and Historical Resources Mitigation

Measures Incorporated into the Proposed Plan

The Van Ness Area Plan would recommend the designation of about 35 buildings as city landmarks. Retention of these buildings would be facilitated, though not ensured, by the following measures:

1) Proposals involving the loss of existing housing or construction above 40 feet in height would necessitate evaluation by the City Planning Commission through the conditional use process. The City Planning Commission would consider the conditional use based, in part, on preservation policies of the Plan. The City Planning Commission would have the authority to approve, disapprove, or approve with conditions the proposal.

2) Based on the preservation policies of the Plan and Proposition M (passed by city voters in November 1986), the Department of City Planning is expected to refer applications for demolition or alteration permits involving buildings identified as architecturally or historically important in the proposed Plan to the Landmarks Preservation Advisory Board (LPAB) for their recommendation. If the LPAB recommendations so warrant, the Department would recommend that the City Planning Commission take Discretionary Review authority regarding such permits. The City Planning Commission would have the authority to approve, disapprove, or approve the permits with conditions. This existing policy has been followed since passage of Proposition M to implement its historic preservation policy.

Measures for Consideration

Preservation of significant buildings in the Van Ness Avenue area could be enhanced if specific requirements and/or procedures regarding preservation were added to the Planning Code. For example, amendments to the Planning Code regarding Van Ness Avenue could require conditional use authorization for all proposed demolitions or significant alterations to identified architecturally and historically important buildings. In addition, such applications could be required to be referred to and considered by the Landmarks Preservation Advisory Board for their recommendation to the City Planning Commission.

E. Transportation and Parking Mitigation

TRAFFIC, PARKING, AND PEDESTRIAN IMPACT MITIGATION

Measures Incorporated into the Proposed Plan

A number of objectives and policies of the Van Ness Avenue Plan establish directives and guidelines that would minimize disruptions in traffic circulation; enhance short-term parking opportunity; and improve pedestrian circulation spaces and amenities in the study area. They could be applied by the City Planning Commission as conditions of approval of future development projects, as appropriate.

Access confined to minor streets. Under the proposed Plan, vehicular, parking, freight loading, and service vehicle access to new development should be located, where possible, on the alleyways bisecting Van Ness Avenue blocks between Golden Gate Avenue and Pine Street. Where vehicular access in such locations is not possible, the proposed Plan calls for access to be located on the intersecting east-west cross streets. Only for sites that have no access to an intersecting street would vehicular access be considered on Van Ness Avenue. This would minimize disruption to arterial traffic flow and transit operations on Van Ness Avenue by confining possible vehicle queues forming at project access points to minor streets.

Conversion of auto showroom storage to parking. The proposed Plan suggests that upper-story storage areas within existing auto showrooms along Van Ness Avenue be converted as community parking facilities for adjacent mixed-use projects. Such conversion would be a highly desirable and appropriate adaptive reuse of these structures.

The Plan encourages new development and existing facilities to adopt a short-term parking rate structure for commercial spaces to discourage commuter parking and maximize available space for visitors and shoppers. The Plan would also encourage more efficient use of private parking facilities by suggesting that these spaces be made available to the public for short-term or evening use when not being utilized by the use to which it is accessory.

The proposed Van Ness Avenue Plan incorporates policies for improving the design and placement of sidewalk pedestrian amenities to provide an environment more pleasing and efficient for pedestrian circulation. The Plan also suggests that new development remove and/or consolidate existing obstacles to pedestrian movement, such as sidewalk elevators, street lamp and Muni power poles, traffic signals, and newsracks, especially those located at sidewalk corners.

Limit curb cuts. The proposed Plan recommends limiting curb cuts across sidewalks to those providing vehicular access to midblock parcels whose only access is from Van Ness Avenue, thereby reducing points of conflict between vehicles and pedestrian travel and with traffic flow on Van Ness Avenue.

The proposed Plan would provide for building entrances to be located to enhance pedestrian circulation. Major residential entrances would front on major east-west streets, with commercial entrances featured on Van Ness Avenue to better distribute pedestrian travel. Additionally, the proposed Plan suggests that minor east-west streets (alleyways) should provide safe and attractive pathways for pedestrians, sharing space with vehicles.

Measures for Consideration

As a condition of approval through the conditional use review process, the Planning Commission could require that a Transportation Systems Management (TSM) program be created for new developments in the Van Ness Avenue Plan area. TSM programs identify and encourage ways of minimizing use of private automobiles. They are currently required for office projects in the downtown C-3 districts under Section 163 of the City Planning Code. TSM programs involve coordination with the Department of City Planning in implementing such measures as the use of transportation brokers to facilitate the on-site sale of transit passes and coordination of ride-sharing needs for residents and employees. The effectiveness of a TSM program, however, is affected by the degree to which a concentrated pool of potential users exists, and how well programs can be tailored to the needs of clients. The determination of whether a future development project would benefit from a TSM program, and the application of such a measure, could be considered on a case-by-case basis through the conditional use review process.

As an alternative to resident auto ownership, an auto rental program could be considered for Van Ness Avenue as new development is completed. This arrangement usually involves maintaining a stock of vehicles by a private vendor for short-term rental use by residents and workers in the area. Van Ness Avenue's central location within San Francisco and access to downtown transit lines could make such a program successful in lieu of car ownership for occasional trips that are not convenient by walking or transit.

To the extent possible, mixed commercial/residential development along Van Ness Avenue should establish joint parking programs to maximize utilization. Since commercial trips are often daytime-oriented, parking demand could be reduced through coordinated sharing of parking facilities with residents and/or visitors who use spaces in the evening, after business hours. Such an arrangement would most likely be formalized as a condition of project approval imposed by the City Planning Commission.

Where there is a demonstrated demand for additional truck loading facilities, on-street loading zones or metered truck spaces may be considered for future developments. Any additional on-street loading space(s), however, should also be evaluated with respect to the level of enforcement available to assure that use of loading spaces is not abused, thus undermining their mitigative purpose. Implementation responsibility would rest with the Department of Public Works.

Bicycle parking facilities provided on-site within future developments would improve convenience for bicyclists and could encourage greater usage of bicycles for travel. The use of bicycles by Van Ness residents and employees provides another alternative which may be particularly attractive for travel within San Francisco. On-site storage may also encourage bicycle use by commuters who can take advantage of bike transport services offered on many of the regional transit systems. The Planning Commission has the authority to require the provision of bicycle facilities in new buildings and upon rehabilitation of existing buildings through the conditional use review process.

Install pedestrian crossing signals at major intersections. The provision of "Walk" and "Don't Walk" pedestrian signalization would increase pedestrian safety at intersections and could decrease traffic delays resulting from higher volumes of pedestrians. It is possible that such installations would require change to traffic signal timing and synchronization to provide greater pedestrian crossing time on Van Ness Avenue, as well as some major cross streets if determined to be warranted. Such a measure would affect signal timing on all integrated North-of-Market computerized intersections and therefore should be considered only when greater pedestrian crossing volumes exhibit a demand. The impacts of such a widespread adjustment to signal integration on transit and traffic circulation would require a detailed technical feasibility study by the Department of Public Works, and technical review by the City's Interdepartmental Standing Committee of Traffic and Transportation (ISCOTT), and public hearing review through the San Francisco Department of Public Works Commission.

TRANSIT IMPACT MITIGATION

Measures Incorporated into the Proposed Plan

The proposed Plan contains two long-term transit development measures that would increase the accessibility between Van Ness Avenue and other areas in San Francisco. Presently, there is no planned study of either of these measures underway. The Plan, however, encourages their consideration for the long-range future. Both would require adoption and funding by the Metropolitan Transportation Commission (MTC) before they could be implemented by the City.

Study the feasibility of a Van Ness subway. Muni has identified Van Ness Avenue as suitable for a subway study. A grade-separated transit right-of-way would improve inter-city and intra-regional transit service, transit speeds and capacity along Van Ness Avenue, as well as improve intercity and regional transit service. It is expected that such a study of this long-range prospect would examine the implications for efficiency and reliability of transit service in the Van Ness corridor.

Investigate the feasibility of extending the California Street Cable Car to the Nihonmachi (Japantown) Center. Extension of the Cable car line, if found to be feasible, would provide an extended use as a transit system for residents, as well as an attractive means of transporting visitors to special places of interest.

Measures for Consideration

The proposed plan encourages greater transit capacity to the project area, as demand warrants. The measures itemized below would serve portions of the Van Ness Avenue Plan project area, as well as Citywide demand. Mitigation measures to address cumulative transportation demand, as itemized in the Downtown Plan EIR, have been incorporated by reference and summarized below. Some of the measures have a more direct relationship with the transit network serving the Van Ness Avenue Plan area and are explained in greater detail.

Those less directly related to the area are listed. Certain measures that reiterate city policy already adopted by the City Planning Commission, but which are not yet in the implementation stage, or which require action by agencies outside the jurisdiction of the Planning Commission, are identified.

The use of diamond lanes for bus use or sidewalk bulbing at bus stops could facilitate transit service on Van Ness Avenue. These measures would need to be approved and implemented by the California Department of Transportation. Alterations in overall vehicular circulation resulting from either measure would require further study to determine effects on overall operational characteristics of the Avenue.

Examine alternatives for Muni Metro service to Geary Boulevard and Third Street/Bayshore Boulevard Corridor. By nearly every measure, the Geary corridor is one of the busiest single transit lines in the region, with daily ridership of 55,000 trips. The Geary corridor provides direct service to the Van Ness Avenue Plan area, and impact analyses have shown future passenger loadings to the Northwest along the Geary corridor to be at uncomfortably crowded levels. While additional demand could be accommodated by adding buses to the corridor, it would be desirable to replace motor coach service with Metro service. While this measure would not be essential to accommodate peak period demand due to planned growth, conversion of the 38-Geary lines to Muni Metro service, with subway operation in the downtown area and surface operation elsewhere, could substantially improve service to the Northwest quadrant.

The Third Street/Bayshore Boulevard corridor extends south of the eastern end of Geary Street, creating a north-south connection which, if improved for transit, would complement existing Metro and BART service and provide increased service to the southeast quadrant of the City. While the relationship between travel demand generated by the VNAP and the Third Street corridor is less direct, improvements in the Geary corridor should be carried out with consideration of whether to also provide Muni Metro service on Third Street. Such improvements for Geary and Third Streets were adopted as city

policy through their inclusion in the Downtown Plan, a part of the Master Plan. Either of these improvements would require approval and funding from the Metropolitan Transportation Commission, and would be implemented by the San Francisco Municipal Railway and Public Utilities Commission.

Refine proposals and implement the Muni "F" streetcar line. The F-line would provide service between the Fort Mason-Fisherman's Wharf area and the Civic Center along The Embarcadero. Current planning includes a connection with the Muni Metro extension at the foot of Market Street at The Embarcadero. The ridership market for this service is expected to be residents, shoppers and workers along the Waterfront. The F-line would operate on Market Street from Civic Center to Justin Hermann Plaza, and extend north to the Fort Mason-Fisherman's Wharf area. Together with Van Ness Avenue, these measures would provide almost complete transit service around the perimeter of the City's northeast quadrant. The F-line was analyzed, along with the Muni Metro extension, in the I-280 Transfer Concept Program, has been adopted by the City Planning Commission as city policy through the Downtown Plan, and has been adopted by the Metropolitan Transportation Commission in the "San Francisco Bay Area New Rail Starts and Extension Plan", 1983. With funding authorization from MTC, this measure would be implemented by the San Francisco Municipal Railway and Public Utilities Commission.

Initiate studies on the potential for light rail transit to Marin County. Light rail transit (LRT) service to Marin County and other North Bay jurisdictions would provide increases in service over existing levels and may generate a shift to greater transit use. A study of the feasibility of this measure, which is supported by policy adopted by the City Planning Commission in the Downtown Plan, has been initiated by a multi-jurisdictional team. The Marin-101 Corridor Study has been underway since the end of 1983, and includes a feasibility analysis for light rail transit in the corridor to determine if greater transit capacity through the project area to downtown San Francisco from Marin County could substantially reduce automobile commuting within the project area. Any North Bay LRT system or other possible solutions for that corridor would have to be multi-jurisdictional, and as such, could not be implemented solely by the City.

Implement a common transit fare system, or regional transit pass, that would allow a passenger to transfer between systems without paying full fare for each system. One approach would be to expand the existing system of discount transfers between Muni and the regional transit agencies to include Golden Gate buses and SamTrans service. The discount transfer system requires operating agreements between Muni and the other transit agencies to allow an exchange of revenues. Past experience indicates that this could result in overall increases in daily transit ridership. The BART/Muni Fast Pass can be seen as a first project that provides for regional transit passes for the cost of a single system pass. Eventually, a system of regional passes could be developed that would allow for interline transfers without any incremental costs to the patron.

The Metropolitan Transportation Commission would be involved in the agreements. A regional transit pass would reduce the cost and complexity of a multi-system transit trip and would allow agencies that now provide competing service (i.e., BART/AC, Muni/BART, Golden Gate buses/Muni) to optimize the structure of routes and service provided. A regional pass program would require transit funding to be handled on a regional basis rather than on the current system of individual transit districts.

Other measures incorporated by reference from the Downtown Plan EIR (Vol. 1, pp. V.E. 1 through 30a): Carry out plans for expanding transit service on BART, Caltrain, Muni, AC Transit, SamTrans, and Golden Gate Transit; extend BART to San Francisco International Airport; Evaluate possible extension of Caltrain to a downtown station location; Build BART extensions to Warm Springs (in Fremont) and North Concord; Provide high occupancy vehicle (HOV) lanes on freeways and freeway on-ramps; implement discount Muni transfers with all suburban corridor transit carriers; improve and expand the Transbay Terminal; moderate curbside on-street boarding of Golden Gate and SamTrans service; initiate feasibility studies for additional ferry service; install and improve transit lanes on downtown streets; initiate a feasibility study for a second type of taxi service.

F. Air Quality Mitigation

Measures Incorporated into the Proposed Plan

The location of the VNAP area within the greater downtown would make public transit and bicycle/pedestrian modes of travel more attractive than the use of automobiles, particularly for future residents who may work downtown. To the extent this mode shift takes place, the number of potential vehicle miles travelled within the city could be reduced, thus reducing potential vehicle emissions, particularly carbon monoxide (CO). This reduction, combined with the increasing fuel efficiency and emission controls of the automobile fleet over the future, is expected to reduce CO levels to within State and Federal standards. Currently, violations of the eight-hour CO emission standards occur on Van Ness Avenue. Concentrations of automobile-generated TSP would also decrease with less automobile use in the downtown area, although such reductions may not eliminate potential future violations of TSP standards.

Measures for Consideration

Implementation of mitigation measures identified for transportation impacts would also mitigate potential air quality impacts. TSM and transit improvement measures that would reduce vehicle miles travelled and/or reduce vehicular congestion through increased ridesharing (carpool, vanpool, and transit), and implementation of flexible and/or staggered work hours, would reduce local and regional emissions of all pollutants.

There are a number of mitigating measures that could be imposed as conditions of project approval by the City Planning Commission through the conditional use process. Requiring project sponsors to sprinkle demolition sites with water continuously during demolition activities; sprinkle unpaved construction sites with water at least twice a day; cover stockpiles of soil, sand, and other such material; and sweep streets surrounding demolition and construction sites at least once per day would reduce potential TSP emissions. Project sponsors should be required to maintain and operate

construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as a prohibition on idling motors when equipment is not in use, and a requirement for specific maintenance programs (to reduce emissions) for equipment that would be in constant use for much of a construction period. These measures could be imposed on a case-by-case basis.

G. Noise Mitigation

Measures Incorporated into the Proposed Plan

The proposed Plan calls for setbacks above the commercial street which would serve as a sound barrier for those units behind the setback. Also recommended is the insulation of bedrooms and whole units by solaria, which would be counted as private usable open space.

The proposed Plan recommends the use of sound-rated windows, deep balconies and solid balcony rails to control noise for dwellings.

The urban design component of the Plan incorporates the principle that noise control for open spaces can be provided by using buildings themselves as a barrier to obstruct noise. The Plan encourages a variety of intimate, personal spaces well insulated from the exterior street noise. Bedroom units are encouraged to be oriented towards interior court spaces.

H. Energy Mitigation

Measures Incorporated into the Proposed Plan

The Plan encourages passive solar heating by permitting solaria to be counted as required private usable open space.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Implementation of the Van Ness Avenue Plan would increase the density and amount of residential development along the Avenue and would allow some new commercial development. The corresponding increase in resident population and commuting to new jobs along the Avenue would increase the use of local transit systems, which would contribute, albeit a relatively small amount, to the cumulative City-wide demand as analyzed in the Downtown Plan Draft Environmental Impact Report (EE81.3). To the extent that Van Ness area development would contribute to cumulative impacts analyzed in this document and the Downtown Plan EIR, the mitigating measures contained in the Downtown and Van Ness Avenue Plans, together with accompanying legislation, would reduce the level of significant transportation impacts by an unknown amount.

Residential development under the proposed Plan is in itself mitigative by locating residents in close proximity to the downtown and Civic Center areas, the City's largest employment centers. While not quantifiable with a reasonable degree of reliability, this relationship would reduce demand on regional and local transportation systems by workers who would otherwise have to commute farther distances to work. It is possible that this mitigative effect could offset contribution of development under the Plan to cumulative impacts.

Additional travel to and from San Francisco generated by development under the Van Ness Area Plan would contribute to cumulative pollutant emission increases which would cause violations of air quality standards for Total Suspended Particulates in San Francisco, with concomitant health effects and reduced visibility.

Lack of specific protection in the proposed Planning Code amendments for buildings of architectural or historical significance in the Plan area could render these structures vulnerable to demolition. To the extent this could occur, loss of architectural and/or historical resources is possible.

VII. ALTERNATIVES TO THE PROJECT

A. No Project Alternative

Under the No Project alternative, existing height, bulk and land use controls would continue to regulate future development. Most of the Van Ness corridor would be regulated by C-2 (Community Business) zoning controls, except for limited areas north of Chestnut Street, which would retain R (Residential) and P (Public) classifications. The Automotive Special Use District between Golden Gate Avenue and Sacramento Street would also be retained. This special use district permits a considerably greater amount of development and economic potential than the controls proposed for Subarea 1 in the Plan; the special use district permits a 10:1 commercial FAR, while the Plan would allow up to a 7:1 mixed commercial and residential FAR. The rest of the C-2 district north of Sacramento Street would permit a 3.6:1 commercial FAR plus any housing meeting the various residential density standards along the Avenue as can be accommodated within the height and building bulk limits. New development would thus be expected to consist mostly of commercial uses, predominantly office space, in buildings generally utilizing the maximum allowable building envelope and Floor Area Ratio.

Under this scenario, up to 2.3 MSF of net new building area could be developed. This development is assumed to occur on the same soft sites assumed for calculation of the development potential for the proposed Plan.

Given these development potential assumptions, overall building area on Van Ness Avenue could increase by about 29 percent over the existing level of development; commercial space could increase by about 35 percent, and residential units could increase by about 28 percent (see Table 16, next page). The actual amount of both commercial and residential space built would probably be less than the estimates given. On some sites, the quantity of parking required for projected commercial development would probably render development uneconomic at the maximum permitted FAR without parking variances, which were not assumed for purposes of the analysis. It is unlikely that the estimated amount of residential space would actually be built without the

TABLE 16: EXISTING AND ESTIMATED (2000) DEVELOPMENT IN VAN NESS AVENUE PLAN AREA UNDER ALTERNATIVE A: NO PROJECT

All Numbers are in Gross Square Feet
Except (DU = Dwelling Units)

	Retail	Office	Hotels	Auto Showrooms	Total Commercial[a]	Residential
Est. New Development (New Construction)	+452,900	+2,278,100	0	0	+2,731,000	+ 626,700 (714 DU)
Estimated Auto Showroom Conversions	+104,200	+312,000		-416,200	0	
Existing Uses Estimated to be Redeveloped (Uses on "Soft Sites")	-792,100[b]	- 96,600	-132,700	0	-1,021,400	- 41,000 (24 DU)
Net New Development	-235,000	+2,493,500	-132,700	-416,200	+1,709,600	+ 585,700 (690 DU)
Existing Uses Estimated to Remain (Uses on "Hard Sites")	1,569,000	859,800	1,220,000	0	3,648,800	3,059,000 (2436 DU)
Total Estimated Development by 2000	1,569,000	3,353,300	1,220,000	0	6,142,300	3,644,700 (3131 DU)

[a] Sum of retail, office, hotel, and auto showrooms

[b] Includes 153,000 sq. ft. of automobile dealerships (non-showroom, non-significant buildings)

mandatory housing requirements proposed under the Van Ness Avenue Plan. The numbers presented represent the high end of a possible range for environmental analysis purposes.

This alternative would produce a net gain of 1,709,100 square feet of commercial space, compared with a net loss of about 270,000 square feet under the Van Ness Avenue Plan. The alternative would produce about 32% of the housing that could be built under the proposed Plan. The increase in employment together with fewer residential units than would be built under the Van Ness Avenue Plan would contribute to greater competition for affordable housing within the Plan area, and within the city-wide and regional housing market.

The most notable urban design implication of this alternative would be the potential loss of architecturally significant buildings. Proposition M, which mandates a priority policy to preserve historic buildings, could help reduce the potential for the loss of such buildings along Van Ness Avenue. However, the Plan's identification of specific buildings as significant would be of more concrete value in helping to save these contributors to urban design. Thus, the potential for loss of significant buildings could be somewhat greater in the absence of the Plan's proposed preservation policies (although no specific buildings proposed for designation as significant were assumed to be demolished in the development estimate methodology for this alternative). In addition, under existing zoning, new buildings between California Street and Pacific Avenue could be slightly higher than under the Plan (105 or 130 feet vs. 80 feet).

Table 17 (next page) presents estimates of employment under the No Project alternative. About 8,400 jobs could be added in the Plan area, in the office development which could occur. With development that could occur under the Plan, about 1,100 additional jobs could be accommodated.

TABLE 17: ALTERNATIVE A: NO PROJECT
VAN NESS AVENUE PLAN STUDY AREA
POTENTIAL NET CHANGE IN EMPLOYMENT

Employment Type	Net New Building (Sq. Ft.)	Density Ratio (Employees/ Sq. Ft.)	Estimated Change In Employment
Office	+2,493,500	1:275	+9,067
Retail	- 82,000	1:350	- 234
Hotel	- 132,700	1:900	- 147
Auto Showrooms	- 569,200	1:1,865	- 305
Total			+8,381

Because additional development (floor area) potential under the No Project alternative would consist primarily of commercial uses, the transportation impacts would not be directly proportional to those identified impacts of the floor area potential under the proposed Plan. Daily person-trip ends (PTE) of about 45,500 would constitute an increase of about 19% over present conditions. Travel demand during the p.m. peak hour (4:30 to 5:30) would be about 74% greater than that projected under the proposed Plan, and about twice as many trips would be generated during the p.m. peak period (4:00 to 6:00). Table 18 presents a summary of the number and types of trips generated under this alternative.

Impacts of this alternative on traffic, transit, and pedestrians relative to the proposed Plan would be proportional to the difference in trips generated. More specifically, vehicle, transit, and pedestrian trips would be about 74% more during the p.m. peak hour, and would be approximately twice as many during the peak period. Vehicle, transit, and pedestrian trips would increase by about 19% over existing conditions. Impacts from this mix of land

uses would more notably affect regional transportation systems than under the proposed Plan, contributing further to projected significant cumulative impacts at the regional screenlines.

TABLE 18
ALTERNATIVE A: NO PROJECT
Net Change in Person Trip Ends (PTE) for
Van Ness Avenue Plan Development Potential Sites
Year 2000

Land Use	Size[1]	Daily Trip Rate[2]	Daily	P.M. Peak Hour	P.M.Peak Period
Commercial					
Net Office	+2,493,500	18.1[3]	+45,132	+5,416	+8,124
Net Retail	- 82,000	68.0[3]	- 5,576	- 235	- 468
Net Auto Showrooms	-569,200	5.8[4,5]	- 3,296	- 316	- 475
Net Hotel	- 76	17.9[4,6]	- 3,150	- 189	- 378
Residential					
Net Residential	+ 690	7.0[4,6]	+ 4,830	+ 836	+1,014
Total Net Change			**+37,940**	**+5,512**	**+7,817**

Notes:
1. Gross square feet, hotel rooms, or dwelling units
2. Trips per 1,000 square feet, dwelling unit or hotel room
3. San Francisco Dept. of City Planning, Downtown Plan EIR, 1984
4. ITE Trip Generation Manual, 3rd Edition, 1982
5. San Francisco Department of City Planning, Survey of Van Ness Avenue auto showrooms, 1986
6. Caltrans "Progress Reports on Trip Generation Research," 1981

While vehicle emissions would increase in direct proportion to the increase in trips generated by this alternative, there would be no projected curbside violations of State or Federal CO standards. As discussed in the Air Quality impacts section, implementation of the state vehicle inspection and maintenance (I/M) program in 1984 combined with the effects of a future fleet of more fuel efficient vehicles is predicted to reduce cumulative CO levels in

San Francisco in 2000. No violations of CO standards are projected. However, emissions of total suspended particulates (TSP) resulting from construction and vehicle trips generated by development on Van Ness Avenue and cumulative development would increase TSP concentrations, which would increase the frequency of TSP standard violations in San Francisco with concomitant health effects and reduced visibility.

This alternative would not fulfill the Mayor's mandate of creating strong incentives for the future provision of housing units along Van Ness Avenue. Under this alternative, housing uses would continue to decline along Van Ness Avenue, as commercial development became more prevalent. Furthermore, a number of architecturally significant buildings could be demolished, thus weakening the urban design character of the Avenue.

B. Incremental Housing Requirement Alternative

Alternative B would establish controls for Subarea 1 only; Subareas 2 and 3 would continue to be regulated by existing (primarily C-2) zoning, and current height and bulk controls. The controls in Alternative B for Subarea 1 would operate within the existing height limits, but different bulk (setback) standards.

Similar to the Plan, this alternative would encourage mixed-use buildings. However, the alternative differs in terms of the required ratio between commercial and residential floor area and the lot size to which these ratios would pertain.

Under this alternative, the mandatory housing requirement would be established in proportion to the amount of commercial space provided. Under this method, buildings containing 20,000 to 40,000 square feet of new or additional commercial space would be required to meet a housing-to-commercial ratio of 1:1 (approximately 25 to 50 dwelling units); buildings between 40,000 and 60,000 square feet would have a required ratio of 2:1 (approximately 100 to 150 units); and buildings with over 60,000 square feet would be required to

meet a ratio of 3:1 (about 225 units or more). These ratios would apply to development sites greater than 9000 square feet (except corner sites) on Van Ness Avenue, and 7500 square feet on east-west cross streets. This incremental approach differs from that put forth in the proposed Plan, which imposes a fixed housing requirement, irrespective of the amount of commercial development proposed or the size of the lot.

Under this alternative, the overall density of commercial development would be limited to a maximum 3.6:1 FAR. Residential density standards would permit one unit for each 125 sq. ft. of lot area. (The proposed Van Ness Plan does not include residential density limits in Subarea 1, and its proposed FARs of 7:1 (in the 130' height district) and 4.5:1 (in the 80' height district) include the area devoted to residential uses in FAR calculation.)

While existing bulk controls regulating building length and diagonal dimensions would remain under this alternative, building setbacks would be required at a building wall height of 90 feet, as opposed to the variable 40 to 80 foot range under the Van Ness Area Plan. Both scenarios would rely on the conditional use process to determine the depth of the setback (and the location of the setback under the Plan controls).

Table 19, next page, presents the land use impacts of this alternative. Under the provisions of Alternative B, the soft site development potential could result in about 400,000 net new square feet of commercial floor area and 1873 net new housing units, compared to a net loss of about 270,000 square feet of commercial space and a net gain of 2189 housing units under the proposed Plan. New housing development would be expected to be sold at market rate prices.

Because incentives to retain the existing significant buildings would only apply to those parcels larger than 15,000 square feet, a number of significant existing buildings on smaller parcels could be expected to be demolished and replaced with higher density development under this alternative.

TABLE 19: EXISTING AND ESTIMATED (2000) DEVELOPMENT
IN VAN NESS AVENUE PLAN AREA UNDER ALTERNATIVE B: INCREMENTAL HOUSING REQUIREMENT

All Numbers are in Gross Square Feet
Except (DU = Dwelling Units)

	Retail	Office	Hotels	Auto Showrooms	Total Commercial[a]	Residential
t. New Development New Construction)	+827,100	+680,800	0	0	+1,507,900	+2,008,100 (1897 DU)
timated Auto howroom Conversions	+ 95,600	+286,200		-416,200	0	
isting Uses Estimated o be Redeveloped Uses on "Soft Sites")	-882,500[b]	- 96,600	-132,700	0	-1,111,800	- 41,000 (24 DU)
t New Development	+ 40,200	+870,400	-132,700	-416,200	+ 396,100	+1,967,100 (1873 DU)
isting Uses Estimated o Remain (Uses on "Hard Sites")	1,418,500	859,800	1,220,000	0	3,498,300	3,059,000 (2436 DU)
otal Estimated evelopment by 2000	1,418,500	1,730,200	1,220,000	0	4,368,700	5,026,100 (4309 DU)

[a] Sum of retail, office, hotel, and auto showrooms

[b] Includes 153,000 sq. ft. of automobile dealerships (non-showroom, non-significant buildings)

As is the case with Alternative A (No Project), Alternative B does not have any provisions for policies for preserving significant buildings. The development potential therefore includes some sites containing buildings that have been identified for preservation in the Plan. The loss of these architecturally significant buildings would diminish the urban design strength of the Avenue. The lack of architectural controls for smaller parcels could lead to tall buildings without setbacks that are out of character and scale with existing development.

Table 20 presents estimates of employment under Alternative B. About 3,250 jobs could be added in the area, in the office and retail development which could occur. With development that could occur under the Plan, about 1,100 additional jobs could be accommodated.

TABLE 20: ALTERNATIVE B: INCREMENTAL HOUSING REQUIREMENT
VAN NESS AVENUE PLAN STUDY AREA
POTENTIAL NET CHANGE IN EMPLOYMENT

Employment Type	Net New Building (Sq. Ft.)	Density Ratio (Employees/ Sq. Ft.)	Estimated Change In Employment
Office	+ 870,400	1:275	+3,154
Retail	+ 193,200	1:350	+ 552
Hotel	- 132,700	1:900	- 147
Auto Showrooms	- 569,200	1:1,865	- 305
Total			+3,254

Under this alternative, daily travel demand would increase by about 17% over existing conditions. Travel demand during the p.m. peak hour (4:30 to 5:30) would be about 35% greater than that projected under the proposed Plan, and about 51% more travel during the p.m. peak period (4:00 to 6:00) would occur than under the Plan. Daily trips would increase by about 86% relative

to the Plan. Table 21 presents a summary of the number and types of trips generated under this alternative.

Impacts of this alternative on traffic, transit, and pedestrians relative to the proposed Plan would be proportional to the difference in trips generated. More specifically, vehicle, transit, and pedestrian trips would be 35% greater during the p.m. peak hour, about 51% more during the peak period, and about 86% more over the course of an entire day. Vehicle, transit, and pedestrian trips would increase by about 17% over existing conditions.

Table 21
ALTERNATIVE B: INCREMENTAL HOUSING REQUIREMENT
Net Change in Person Trip Ends (PTE) for
Van Ness Avenue Plan Development Potential Sites
Year 2000

Land Use	Size[1]	Daily Trip Rate[2]	Daily	P.M. Peak Hour	P.M. Peak Period
Commercial					
Net Office	+870,400	18.1[3]	+15,754	+1,869	+2,836
Net Retail	+193,200	68.0[3]	+13,138	+ 552	+1,104
Net Auto Showrooms	-569,200	5.8[4,5]	- 3,296	- 316	- 475
Net Hotel	- 76	17.9[4,6]	- 3,150	- 189	- 378
Residential					
Net Residential	+1,873	7.0[4,6]	+13,111	+2,268	+2,753
Total Net Change			**+35,557**	**+4,184**	**+5,840**

Notes:
1. Gross square feet, hotel rooms, or dwelling units
2. Trips per 1,000 square feet, dwelling unit or hotel room
3. San Francisco Dept. of City Planning, Downtown Plan EIR, 1984
4. ITE Trip Generation Manual, 3rd Edition, 1982
5. San Francisco Department of City Planning, Survey of Van Ness Avenue auto showrooms, 1986
6. Caltrans "Progress Reports on Trip Generation Research," 1981

While vehicle emissions would increase in direct proportion to the increase in trips generated by this alternative, there would be no projected curbside violations of State or Federal CO standards. As discussed in the Air Quality impacts section, implementation of the state vehicle inspection and maintenance (I/M) program in 1984 combined with the effects of a future fleet of more fuel efficient vehicles is predicted to reduce cumulative CO levels in San Francisco in 2000. No violations of CO standards are projected. However, emissions of total suspended particulates (TSP) resulting from construction and vehicle trips generated by development on Van Ness Avenue and cumulative development would increase TSP concentrations, which would increase the frequency of TSP standard violations in San Francisco with concomitant health effects and reduced visibility.

This alternative would not fulfill the Mayor's mandate of creating strong incentives for the future provision of housing units along Van Ness Avenue to the extent of the proposed Plan. This alternative has no policies for retention of significant buildings, thus rendering demolition of some significant buildings more likely, which could weaken the urban design character of the Avenue.

C. RC-4 Alternative

Under Alternative C, the entire Van Ness Avenue study area (Subareas 1,2 and 3) would be regulated by RC-4 (Residential Commercial Combined, High Density) zoning controls and other existing applicable provisions of the Planning Code. Together with rear yard and open space requirements, existing height and bulk districts would continue to regulate building mass. An RC-4 classification would permit mixed use development allowing up to a 4.8 FAR of commercial development with conditional use authorization, and housing development at a density of one dwelling unit for every 200 square feet of lot area.

Under this scenario, about 1.3 MSF of net new building area could be developed (refer to Table 22, next page). This development is assumed to

TABLE 22: EXISTING AND ESTIMATED (2000) DEVELOPMENT IN VAN NESS AVENUE PLAN AREA UNDER ALTERNATIVE C: RC-4 ZONING

All Numbers are in Gross Square Feet
Except (DU = Dwelling Units)

	Retail	Office	Hotels	Auto Showrooms	Total Commercial[a]	Residential
t. New Development New Construction)	+467,800	+ 78,500	0	0	+ 546,300	+1,818,400 (2225 DU)
timated Auto nowroom Conversions	+104,200	+312,000		-416,200	0	
isting Uses Estimated o be Redeveloped Uses on "Soft Sites")	-792,100[b]	- 96,600	-132,700	0	-1,021,400	- 41,000 (24 DU)
t New Development	-220,100	+293,900	-132,700	-416,200	- 475,100	+1,777,400 (2201 DU)
isting Uses Estimated o Remain (Uses on Hard Sites")	1,569,000	859,800	1,220,000	0	3,648,800	3,059,000 (2436 DU)
tal Estimated velopment by 2000	1,569,000	1,075,200	1,220,000	0	3,864,200	4,604,100 (4392 DU)

[a] Sum of retail, office, hotel, and auto showrooms

[b] Includes 153,000 sq. ft. of automobile dealerships (non-showroom, non-significant

occur on the same soft sites assumed for calculation of the development potential for the proposed Plan. Under this alternative, a net loss of about 500,000 square feet of commercial floor area could occur, and approximately 2200 net new dwelling units could be built. This alternative does not assume any special provisions for preserving significant buildings; however, the development potential estimate methodology did not assume demolition of any buildings recommended for preservation in the VNAP policies.

The development potential for this alternative is conservatively based on an assumption that the 4.8 FAR would be constructed. The requirement for conditional use review would be triggered by any commercial floor area above the ground story and/or any type of development above 40 feet in height. While it could be expected that close to full commercial potential would be realized in the more use intensive stretch of Van Ness Avenue in Subarea 1, it is likely that commercial development in Subarea 2 (and Subarea 3) would be more restricted due to its stronger residential character.

Table 23 presents estimates of employment under Alternative C. About 425 jobs could be added in the area. With development that could occur under the Van Ness Avenue Plan, about 1,100 jobs could be accommodated.

TABLE 23: ALTERNATIVE C: RC-4 ZONING
VAN NESS AVENUE PLAN STUDY AREA
POTENTIAL NET CHANGE IN EMPLOYMENT

Employment Type	Net New Building (Sq. Ft.)	Density Ratio (Employees/ Sq. Ft.)	Estimated Change In Employment
Office	+ 293,900	1:275	+1,069
Retail	- 67,100	1:350	- 192
Hotel	- 132,700	1:900	- 147
Auto Showrooms	- 569,200	1:1,865	- 305
Total			+ 425

Under this alternative, daily travel demand would increase by about 5% over existing conditions. Travel demand during the p.m. peak hour (4:30 to 5:30) and peak period (4:00 to 6:00) would be about 16% and 24% less, respectively, than that projected under the proposed Plan. Daily trips would be about one-half as much than under the Plan. Table 24 (next page) presents a comparison of the number and types of trips generated under both scenarios.

Table 24
ALTERNATIVE C: RC-4 ZONING
Net Change in Person Trip Ends (PTE) for
Van Ness Avenue Plan Development Potential Sites
Year 2000

Land Use	Size[1]	Daily Trip Rate[2]	Daily	P.M. Peak Hour	P.M.Peak Period
Commercial					
Net Office	+293,900	18.1[3]	+ 5,312	+ 638	+ 956
Net Retail	- 67,100	68.0[3]	- 4,563	- 191	- 384
Net Auto Showrooms	-569,200	5.8[4,5]	- 3,296	- 316	- 475
Net Hotel	- 76	17.9[4,6]	- 3,150	- 189	- 378
Residential					
Net Residential	+ 2,201	7.0[4,6]	+15,407	+2,666	+3,235
Total Net Change			+ 9,710	+2,608	+2,954

Notes:
1. Gross square feet, hotel rooms, or dwelling units
2. Trips per 1,000 square feet, dwelling unit or hotel room
3. San Francisco Dept. of City Planning, Downtown Plan EIR, 1984
4. ITE Trip Generation Manual, 3rd Edition, 1982
5. San Francisco Department of City Planning, Survey of Van Ness Avenue auto showrooms, 1986
6. Caltrans "Progress Reports on Trip Generation Research," 1981

Impacts of this alternative on traffic, transit, and pedestrians relative to the proposed Plan would be proportional to the difference in trips generated. More specifically, vehicle, transit, and pedestrian trips would be about five-sixths as much during the p.m. peak hour, three-quarters as much

during the peak period, and about 50% less over the course of an entire day under this alternative. Vehicle, transit, and pedestrian trips would increase by about 5% over existing conditions.

While vehicle emissions would increase over existing conditions in direct proportion to the increase in trips generated by this alternative, there would be no projected curbside violations of State or Federal CO standards. Emissions would be lower than would occur under the proposed Plan. As discussed in the Air Quality impacts section, implementation of the state vehicle inspection and maintenance (I/M) program in 1984 combined with the effects of a future fleet of more fuel efficient vehicles is predicted to reduce cumulative CO levels in San Francisco in 2000. No violations of CO standards are projected. However, emissions of total suspended particulates (TSP) resulting from construction and vehicle trips generated by development on Van Ness Avenue and cumulative development would increase TSP concentrations, which would increase the frequency of TSP standard violations in San Francisco with concomitant health effects and reduced visibility.

This alternative does not include any special provisions for preserving significant buildings in the Van Ness Avenue area and thus could result in the demolition of a number of architecturally significant buildings, which would weaken the urban design character of Van Ness Avenue (although no such demolitions were assumed in the soft-site analysis). Because no incentives or requirements for the construction of new housing units would be offered, it is doubtful whether the projected "worst-case" estimate of 2,201 dwelling units would actually be constructed under this alternative.

D. No Change Alternative

Under this alternative, the existing setting would be maintained. Some kind of special controls would have to be legislated in order to preserve the status quo. The setting is discussed in Section III of this report (Environmental Setting).

Under this alternative, localized impacts forecast due to development under the Plan would not occur. However, cumulative impacts due to development elsewhere in the city and region would still occur.

This alternative would freeze all development and change in the Van Ness corridor and would not fulfill the need for growth and change, particularly regarding potential housing resources.

VIII. SHORT-TERM vs. LONG-TERM CONSEQUENCES OF ADOPTING THE PROPOSED VAN NESS AREA PLAN

In the long term, implementation of the Van Ness Area Plan, by changing the land use designation for the area, would create a residential resource (potentially about 2,200 units) which would respond to a need for additional housing in San Francisco as identified in the Housing Element and Downtown Plan EIR. Located near the Downtown C-3 and Civic Center districts, it would also offer housing to downtown employees who would otherwise be commuting over longer distances. Thus, implementation of the Plan could reduce demand on regional and local transportation systems compared with provision of an equivalent amount of housing elsewhere, with a corresponding reduction in air pollution emissions.

Implementation of the proposed Plan in conjunction with cumulative growth examined in the Downtown Plan EIR, however, would lead to violations in air quality standards for Total Suspended Particulates (TSP), with concomitant health effects and reduced visibility. Contribution of the development under the Plan to these effects would be relatively small.

IX. IRREVERSIBLE ENVIRONMENTAL CHANGES

Implementation of the Van Ness Avenue Plan would increase the density of residential development along the Avenue, precluding some commercial development which could be expected to take place under current regulations. The proposed Plan would allow for new residential and commercial mid- and high-rise development in the Van Ness area and would thus commit such uses to continue in the future. Construction materials and energy used for the new development would involve use of some non-renewable resources. Continued development would also result in continuing increases in travel demand. The additional trips, plus construction activities from new development, in combination with other ongoing development and trip-increasing activities in San Francisco and the region, could subject the region to future air quality problems from increases in TSP emissions.

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APPENDIX I

Transportation Methodology

I. Introduction

The transportation impact analysis for the Van Ness Avenue Plan (VNAP) EIR employed traditional travel demand computer modeling techniques to project future demand on the transportation system serving both the project area and the region. The methodology used is the same as that for the Downtown Plan EIR, in that it is an employment-based methodology. The model applies a trip generation rate to the number of employees in each business category (or unit of occupancy, in the case of residential and hotel land uses) distributes trips to geographic destinations by travel mode, and assigns trips to transportation systems for daily (24-hour), P.M. peak hour and P.M. peak period analysis. Travel distribution is assigned to four quadrants within San Francisco (NE, NW, SE, SW), the North Bay Area (NB), the East Bay (EB) and the South Bay Peninsula (SB). Projected travel demand on each transportation system was calibrated to measurements of conditions that currently occur at each of the regional screenlines as a means of ensuring a reasonable relationship between projected and current travel behavior.

II. Trip Generation

Generally, the same trip generation assumptions were used for the VNAP EIR as for the Downtown Plan EIR (DTPEIR). The major points of departure were for land uses not included in the Downtown Plan (auto showrooms and residential). In order to calculate projected trip generation, two factors are needed. The first is an employee density factor to convert floor area development potential into the number of employees that would occupy the space according to projected land use or business activity. The second is the trip generation factor that enables calculation of the projected number of trips made by the projected employment. In the case of residential or hotel uses, the trip generation rate is applied to the number of dwelling units or hotel rooms. The employee density factors and trip generation factors for each of the land uses in the VNAP area are presented in Table A.1.

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Table A.1
Employment Density and Trip Rates
for the Van Ness Avenue Plan

Business Activity	Employment Density	24-Hour Trip Rate Per Employee
Office [1]	276	5.0
Convenience Retail [1]	350	23.8
Auto Dealerships [2, 3]	1,865	10.8

Land Use	24-Hour Trip Rate per unit or room
Residential [3, 4]	7.0
Hotel/Motel [3, 4]	15.8

1 S.F. Dept. of City Planning, Downtown Plan FEIR, 1983

2 Employment density for auto dealerships was based on a survey of existing auto dealerships located on Van Ness Avenue, conducted by the Department of City Planning in June, 1986.

Dealership	Gross square feet	On-site employees	Employment density
Chevrolet	173,880	72	2,415
Volkswagen	42,600	30	1,420
Lincoln-Mercury	216,000	110	1,964
Oldsmobile	95,885	45	2,130
Cadillac	59,200	58	1,021
Total	587,565	315	

Average Employment Density: 1865 square feet/employee

The 24-hour trip rate per employee for auto dealerships was derived from the ITE published rate of 5.8 pte per thousand square feet of floor area. Thus, in order to derive a 24-hour trip rate per 1865 sq. ft. of floor area: 1865 X .0058 = 10.8 pte/1000 s.f.

3 ITE, Trip Generation Manual, 3rd Edition, 1982

4 Caltrans. Progress Reports on Trip Generation Research, 1976 and 1981.

III. Trip Distribution

The trip distribution process, which involves assigning travel to four geographic quadrants of San Francisco and to the outlying region, is multi-leveled. There are different trip distributions for trips associated with non-residential (commercial) and residential development potential under the Van Ness Avenue Plan.

During model calibration it became apparent that the distribution of travel for the VNAP would be different from that for C-3 downtown travel characteristics. The mixed-use, predominantly residential development program encouraged by the Plan does not match the mix of downtown business activities for which detailed trip distribution assumptions are available through the Downtown Plan EIR. Therefore, alternative sources for trip distribution were sought. The 1981 MTC Regional Travel Characteristics survey, the results of which were published in October 1983, provided the most comprehensive alternative source available. The process used to determine these distribution patterns was an iterative one, using the MTC survey material as the baseline along with the Downtown Plan EIR data.

The MTC survey provides data used to project commercial and residential travel characteristics. Within each of these categories (i.e. commercial vs. residential), the survey also contains data that distinguishes between "work" and "non-work" components of travel. "Work" trips are defined primarily as travel made by employees to or from their work place (defined as commercial work trips), or to or from home (defined as residential work trips). Commercial "non-work" travel is generally visitor (non-employee) travel to commercial uses; residential "non-work" travel is that made by residents for purposes other than work, such as shopping or school.

The VNAP EIR analysis evaluates projected travel demand by the geographic travel corridors introduced in the Downtown Plan EIR (DTPEIR) analysis, which consist of four quadrants in San Francisco (NE, NW, SE, SW) and three regional corridors (the North Bay, East Bay and South Bay areas). The roughly equivalent geographic units for the MTC data are "superdistricts." The rough correlation between the superdistricts and DTPEIR travel corridors are presented below in Table A.2.

Table A.2:
General Correlation Between MTC Superdistricts and EIR Travel Corridors

MTC Superdistrict	DTPEIR/VNAP EIR Travel Corridors
1	San Francisco Northeast
2	San Francisco Northwest
3	San Francisco Southeast
4	San Francisco Southwest
5-14	Peninsula
15-28	East Bay
29-34	North Bay

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1. VNAP Employee Trip Distribution.

The VNAP area defines the western edge of MTC Superdistrict 1. Journey-to-work person trip totals from each MTC superdistrict to Superdistrict 1 were plotted, to determine the geographic distribution, which was assumed for commercial work trips in the Superdistrict 1-VNAP area in 1981 (Table A.3).

Table A.3:
24-Hour Commercial Work Trip Distribution
in MTC Superdistrict 1 (1981)

San Francisco:	
NE	11.6%
NW	16.8%
SE	17.2%
SW	7.8%
Peninsula	16.9%
East Bay	19.7%
North Bay	9.9%
	100%

The next step in the process was to adjust 1981 employee residence patterns to the 1984/85 base year conditions, based on work prepared by Recht Hausrath and Associates for the South of Market and Mission Bay Plans in July 1986. In addition, analysis by Department of City Planning staff of regional commute travel trends revealed an estimated decrease of approximately 7.2% in person-trip travel during the two hour (4-6PM) commute period across the Golden Gate Bridge between 1981 and 1984. An increase in person-trip travel to the East Bay of approximately 24.2% (1981-84) and 8.8% (1982-84) during the two-hour evening commute period was also observed. These adjustments were made to the appropriate corridors, with the balance assigned to "internal" travel within the project area (shown in Table A.4), which were assumed to be the 1984 conditions in the VNAP EIR analysis.

Table A.4:
24-Hour Commercial Work Trip Distribution (1984)

San Francisco:	
NE	11.6%
NW	16.8%
SE	17.2%
SW	7.8%
Peninsula	16.9%
East Bay	20.6%
North Bay	8.8%
Internal	0.3%
	100%

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To project VNAP employee trip distribution for the year 2000, 1984 trip distributions were assumed to change in approximately the same ratios as those for downtown C-3 employees analyzed in the Downtown Plan EIR. The DTPEIR identified different ratios for office work and non-office work distribution changes for the C-3 districts, resulting in different distribution percentage assumptions for each category in the year 2000 (Table A.5), which were assumed in the VNAP EIR analysis.

Table A.5
24-Hour Work Trip Distribution for VNAP Employees (2000)

	Office Workers	Non-Office Workers
San Francisco:		
NE	10.4%	7.6%
NW	16.5%	12.6%
SE	12.9%	9.0%
SW	8.0%	6.1%
Peninsula	17.7%	22.8%
East Bay	22.6%	27.4%
North Bay	9.2%	11.0%
Internal	2.7%	3.5%
	100%	100%

VNAP Commercial Non-work Trip Distribution. Non-work trip data was also compiled from the 1981 Regional Travel Characteristics (Table 6.3.5A). Internal trip connections both to and from each group of superdistricts were compiled and averaged to determine an overall distribution for non-work trips in the VNAP area. The commercial non-work trip distribution (Table A.6) was assumed to remain constant from 1981 to 2000 in the VNAP EIR analysis.

Table A.6:
Estimated 24 Hour Employee Non-work Trip Distribution

San Francisco:	
NE	13.0%
NW	26.7%
SE	18.1%
SW	4.2%
Peninsula	10.5%
East Bay	14.7%
North Bay	5.8%
Internal	7.0%
	100%

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Peak Hour/Period Characteristics for VNAP Commercial Trips. The analysis focuses on p.m. peak hour (4:30-5:30 p.m.) and peak period (4:00-6:00 p.m.) travel conditions, which represent the most congested overall levels on the transportation system. Overall travel demand at other times of the day generally would not exceed these levels. Table A.7 below presents the proportion of 24-hour commercial work trips that are assumed to occur during the peak hour and peak period in the VNAP EIR analysis by land use.

Table A.7:
Peak Hour/Peak Period Commercial Travel Characteristics
for Land Uses Under the VNAP (2000)

	P.M. Peak Hour			P.M. Peak Period		
	% of 24 Hr. Trips	% of Work Trips	% of Non-work Trips	% of 24 Hr. Trips	% of Work Trips	% of Non-wo Trips
Office [1]	12	83	17	18	83	17
Convenience Retail [1]	4.2	50	50	8.4	28	72
Auto Dealerships [2,3]	9.6	30	70	14.4	25	75
Residential [2,4]	17.3	50	50	21.0	50	50
Hotel/Motel [1]	3.2	60	40	7.0	64	36

1. S.F. Dept. of City Planning. Downtown Plan EIR, (EE81.5, certified October 1 4)
2. ITE Trip Generation Manual, 3rd Edition, 1982
3. S.F. Dept. of City Planning. Survey of Auto Dealerships on Van Ness Ave., 19
4. Caltrans. "Progress Reports on Trip Generation Research," 1981.

Tables A.8 & A.9 below present the distribution of the total number of work t ps from all land uses to the geographic travel corridors projected during the P.M. eak hour or peak period for 1984 and 2000. The distribution assumption for the year 2000 is the same as that used in the DTPEIR analysis, which distinguished betwee office and non-office commercial uses.

Table A.8:
P.M. Peak Hour/Period Work Trip Distribution Under the VNAP (1984)

	Office Person Trip Ends (PTE)			Non-Office PTE		
	% of 24 Hr. Trips	% of Peak Period	% of Peak Hr.	% of 24 Hr. Trips	% of Peak Period	% of Peak Hr.
San Francisco:						
NE	11.6	12.3	9.3	11.6	12.3	9.3
NW	16.8	16.6	15.8	16.8	16.6	15.8
SE	17.2	17.0	15.3	17.2	17.0	15.3
SW	7.8	7.3	6.4	7.8	7.3	6.4
Peninsula	16.9	18.3	20.0	16.9	18.3	20.0
East Bay	20.6	19.0	21.5	20.6	19.0	21.5
North Bay	8.8	9.3	11.6	8.8	9.3	11.6
Internal	0.3	0.2	0.1	0.3	0.2	0.1
	100%	100%	100%	100%	100%	100%

Table A.9:
P.M. Peak Hour/Period Commercial Work Trip Distribution Under the VNAP (2000)

	Office PTE			Non-Office PTE		
	% of 24 Hr. Trips	% of Peak Period	% of Peak Hr.	% of 24 Hr. Trips	% of Peak Period	% of Peak Hr.
San Francisco:						
NE	10.4	10.2	7.6	7.6	7.9	5.5
NW	16.5	14.4	13.4	12.6	12.5	12.2
SE	12.9	13.9	11.7	9.0	8.9	8.1
SW	8.0	7.2	6.3	6.1	5.8	4.9
Peninsula	17.7	23.8	23.4	22.8	24.6	26.5
East Bay	22.6	19.1	24.5	27.4	28.9	24.8
North Bay	9.2	9.8	11.7	11.0	9.5	16.2
Internal	2.7	1.6	1.4	3.5	1.9	1.8
	100%	100%	100%	100%	100%	100%

Peak hour and peak period distribution for commercial non-work trips was assumed to be the same as the 24 hour distribution presented in Table A.6, consistent with the assumption used in the DTPEIR analysis.

2. Resident Trip Distribution

The MTC 1981 Regional Travel Characteristics were again used to determine geographic distribution patterns for residential work and non-work trips.

In the case of residential work trips, it was recognized that the project forms the border between MTC Superdistricts 1 and 2 (corresponding to the Northe and Northwest quadrant of San Francisco, respectively, as analyzed in the Downto Plan EIR). Due to this fact, an averaging of journey-to-work characteristics of these two areas were determined to yield more reliable data.

As a result, MTC trips to and from both of these superdistricts to the superdistrict groups corresponding to the travel "corridors" (i.e. San Francisco NW, SE, SW, and outlying regions) were compiled. Thus, for example, the percent used for residential work trips to Northeast San Francisco is based on data from MTC trip tables from both Superdistrict 1 and Superdistrict 2. This averaging resulted in the distribution for residential work trips shown in Table A.10. Th distribution was assumed for 1984 and 2000.

Table A.10:
24-Hour VNAP Area Residential Work Trip Distribution

San Francisco:	
NE	59.1%
NW	17.4%
SE	9.2%
SW	2.7%
Peninsula	5.0%
East Bay	5.3%
North Bay	1.3%

Distribution patterns for VNAP area residential work trips were assumed to remain constant over the P.M. peak hour and P.M. peak period, and to the year 20

For VNAP residential non-work travel distribution, a similar averaging procedure was used. However, consultation with MTC staff resulted in a decision calculate and use a citywide average distribution for non-work travel. Trip linkages were therefore compiled from the 1981 MTC Regional Travel Characteristi trip tables from each of the four San Francisco superdistricts to obtain city-wi trip assignments to each of the other individual or groups of superdistricts corresponding to the travel corridors presented in the analysis.

This process resulted in an average distribution to each of the corridors, presented in Table A.11, assumed for residential non-work trips in the VNAP area The distribution was assumed to remain constant for both 24-hour and P.M. peak hour/period to the year 2000.

Table A.11:
24-Hour Residential Non-work Trip Distribution Under the VNAP

San Francisco:	
NE	12.7%
NW	9.2%
SE	6.6%
SW	5.4%
Peninsula	5.9%
East Bay	1.6%
North Bay	1.1%
Internal	57.5%

IV. Modal Split

The MTC 1981 Regional Travel Characteristics data was also used as a base for determining modal split characteristics for the project area. The MTC data is presented by the following modes: Vehicle Driver; Vehicle Passenger; Transit; Walk; and Other.

"Vehicle Driver" and "Vehicle Passenger" were converted into "Drive Alone" and "Rideshare" mode categories presented in the VNAP EIR analysis through a process using average rideshare vehicle occupancy rates for each corridor, based on data from MTC on the Bay Bridge, and the Golden Gate Bridge, Highway and Transit District.

Comparison between the MTC 1981 modal splits for 24-Hour commercial work trips and those for Civic Center public employee work trips in 1981 as reported in the "Civic Center Transportation Systems Management Program Final Report" (S.F. Dept. of City Planning, November 1981) confirmed that the MTC data was a reasonable approximation of modal split patterns for 24-Hour commercial work trips in the VNAP vicinity.

As noted earlier, analysis by Department of City Planning staff resulted in adjustments to the 24-Hour 1981 MTC modal percentages for employee work trips in the East Bay and North Bay corridors to account for changes in vehicle volumes and transit ridership recorded between 1981 and 1984.

The same process of using MTC data provide the assumptions for 24-Hour modal split rates by corridor for other trip purposes analyzed in the VNAP EIR analysis (Commercial non-work trips, resident work and non-work trips). The modal splits for commercial and resident non-work travel represent citywide averages, because VNAP non-work trip characteristics are less likely to differ from non-work trips city-wide. Conversely, VNAP work trip characteristics, which are more heavily influenced excellent access to public transit, would differ from city-wide patterns. Modal split assumptions developed for residential work trips are an average of 24-Hour modal splits for residents of Superdistricts 1 and 2.

Modal splits for the P.M. peak hour and P.M. peak period in the VNAP analysis were derived from the 24-Hour modal splits, assuming the same ratio of P.M. peak hour/period modal percentages to 24-hour modal percentages used in the DTPEIR transportation analysis, by travel corridor.

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The modal splits used for each corridor, for the 24-hour, peak hour and pe period, by subarea, in the VNAP analysis are available for public review at the Department of City Planning - Office of Environmental Review, 450 McAllister Str San Francisco, CA 94102.

V. Travel Assignment

Travel assignment refers to the allocation of the total number of trips, b mode, to the various regional highways and transit carriers serving the geograph travel corridors (e.g. San Francisco NE, NW, SE, SW quadrants, East Bay, etc.) identified in the analysis. The transportation analysis model used to evaluate development potential assigns outbound highway vehicle travel to four regional highway screenlines, and assigns outbound transit travel to the four San Francis (Muni) screenlines and various regional transit screenlines. The screenlines we first developed as a means for projecting impacts on the local and regional transportation system in the Downtown Plan EIR (DTPEIR). The model assigns only outbound travel during the P.M. peak hour and peak period. For purposes of the transportation analysis model, "outbound" trips are only counted if they cross o of these screenlines. Many trips from the downtown area may travel in an outbou direction, but they would not register as outbound trips unless they cross a screenline.

The dual use of "outbound" (i.e. to describe direction vs. trips as counte a screenline), and the locational relationship of the VNAP area to the Muni Northeast and Northwest screenlines in the MUNI analysis make the travel assignm process a complicated one to understand. ("Inbound" trips, described below, als require careful understanding.)

The project area is adjacent to, and parallels the Muni Northwest screenli and is bisected by the Northeast screenline at around Washington Street (close t the division between Subareas 1 and 2 in the VNAP). With future residential development in the VNAP area, some of what would otherwise be outbound trips fr the downtown area would instead be intercepted in the VNAP area, never crossing MUNI screenline and thus not being counted in projected outbound travel demand. From the perspective of the VNAP area, these would be inbound trips. The distinction between the directional orientation of trips was particularly import for evaluating impacts of growth in the VNAP area on both the Muni Northwest and Northeast screenlines, and required separate inbound and outbound computer runs or this analysis.

Assumptions of the split between inbound-outbound assignment of commercial work trips generated by the VNAP were the same as those used for C-3 trips analy in the DTPEIR. All commercial work trips during the peak commute periods were assumed to be outbound from the VNAP area; for commercial non-work trips, the inbound-outbound split was assumed to be 50-50.

For the residential work trip assignment, 100 percent of work trips were assumed to be <u>inbound</u> to the project area. Some of those inbound trips to the V area coming from the downtown (C-3) districts were projected as outbound trips i the DTPEIR cumulative analysis. Residential non-work trips were assumed to be s 33 percent inbound and 67 percent outbound based on the ITE Trip Generation Manu 3rd Edition, 1982.

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1. Highway Travel Assignment and Analysis.

The combined outbound vehicle travel from the study area during the P.M. peak hour and peak period was assigned to the regional highway screenlines. This includes VNAP area employees traveling home from work, outbound commercial non-work vehicle travel, and VNAP resident non-work travel in the outbound (from the VNAP area) direction. The sum of these trips represent a proportion of the total number of trips projected at these screenlines in the DTPEIR cumulative analysis.

For determining vehicle volumes from person-trips by auto modes, carpool vehicle occupancy was assumed to average 2.7 persons per vehicle, vanpools 11.8 persons per vehicle, and 4.1 persons per vehicle for "other" (including taxis, club buses, jitneys, etc.), the same assumptions as used in the DTPEIR analysis.

All vehicle trips to the North Bay and East Bay were assigned to the Golden Gate and Bay Bridges respectively. Vehicle travel to the Peninsula was split, 65 percent on U.S. 101, 30 percent on I-280, and 5 percent on local streets, based on an examination of those routes to the South Bay that were the most easily accessed from the project area. Impacts of the projected cumulative vehicle volumes on the freeways are expressed in levels of service (from A to F), which are defined in Table A.12.

2. Travel Assignment to the Local Street Network and Analysis.

For the analysis of vehicle travel on the local street system, both inbound and outbound trips to and from the project area were loaded onto the various streets in the analysis. Vehicle trips inbound to the project area from the greater downtown and the East Bay were assigned onto primary arterial one-way streets leading away from the C-3 District (e.g. Pine, Sutter, Geary Streets). Inbound trips from the Southeast and Southwest quadrants of San Francisco, and from the Peninsula were assigned to both Van Ness Avenue and Franklin Street. Inbound trips from the Northwest quadrant of San Francisco and the North Bay were not loaded onto any of the local streets (except to the extent that they may need to travel on Van Ness Avenue for one or two blocks to access parking) because they would primarily be traveling counter to the direction of commute travel and thus not contributing to peak congestion levels.

Outbound vehicular travel from the project area was similarly assigned to Van Ness Avenue, and Franklin and Gough Streets and local arterials serving primarily outbound (from the downtown) travel. To the limited extent that travel specific to individual soft sites could be estimated, vehicles were also assigned to local streets (such as Polk and Franklin) most likely to be impacted, which generally accounts for the linkage between site-specific parking and associated circulation to the arterial street system.

The level of service analysis utilized the arterial flow methodology in the 1985 Highway Capacity Manual, which estimates speed and delay on segments of arterial streets. This methodology was necessary because it is not possible to estimate turn movements and exact traffic volumes for specific intersections, which are required for a volume demand/capacity level-of-service analysis methodology. This analysis assumed that local streets would experience an 11 percent increase in traffic volumes to the year 2000, as suggested by data used for the Downtown Plan EIR, I-280 Concept Program, and 1983 San Francisco Cordon Count, of which VNAP trips would contribute a part.

TABLE A.12: TRAFFIC LEVELS OF SERVICE FOR FREEWAYS

Level of Service	Description	Volume/Capacity (v/c) Ratio[a]
A.	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00-0.60
B.	Level of Service B is in the higher speed range of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.	0.61-0.70
C.	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained.	0.71-0.80
D.	Level of Service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.	0.81-0.90
E.	Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds (typically about 30 to 35 mph) than in Level D, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration.	0.91-1.00
F.	Level of Service F describes forced flow operation at low speeds (less than 30 mph), in which the freeway acts as storage for queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	1.00+

(a) Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from information in the Highway Capacity Manual, Special Report '87, Highway Research Board, 1965.

Table A.13 gives Level-of-Service criteria for the arterial flow methodology used in this analysis.

3. Transit Assignment and Analysis.

The VNAP transit analysis assumes the projected cumulative ridership demand at the transit screenlines (as with all the regional screenlines) in year 2000 that has been analyzed in the DTPEIR, which is incorporated by reference. Transit impacts are expressed in terms of levels of service (A to F), which are described in Table A.14.

The combined outbound commercial and residential transit travel from the VNAP area was assigned to the regional transit (BART, AC Transit, Golden Gate Transit and Ferry, SamTrans, and Caltrain Peninsula Commute Train) screenlines, and to the four Muni screenlines. The result was an estimate of the proportion of trips projected at each transit screenline in the DTPEIR analysis attributed to demand from development potential under the VNAP. These estimates are more approximate in nature than the cumulative screenline projections in the DTPEIR, because there is no other available database from which to accurately project impacts at a sub-screenline level of detail. That is, it is not possible to project impacts as accurately on individual transit routes within a given screenline corridor.

The DTPEIR transit demand projections assumed service capacity increases between 1984 and 2000, as described in DTPEIR Volume 2, Appendix J, which are also reflected in the cumulative transit screenline analysis presented in the VNAP EIR. Service capacity on Muni lines providing direct service to the VNAP area in 2000 was assumed to increase in the same proportion as the overall increases assumed for their respective screenlines in the DTPEIR analysis.

The VNAP would have limited impacts on regional transit carriers, constituting a negligible proportion of the cumulative totals projected in the year 2000 in the DTPEIR. VNAP impacts on Muni, however, would be more substantial and complicated to analyze due to the location of the project area relative to the locations of the Northwest and Northeast screenlines. The remainder of the discussion therefore focuses exclusively on projected Muni impacts. Projected impacts are based on Muni's overall service standard of 1.25 passengers per seat (equivalent approximately to a level of service D). Table A.14 provides a full description of level of service conditions.

As discussed above in the introduction to this Travel Assignment subsection, the MUNI analysis involved a complicated process that had to keep track of what were defined as inbound trips to the VNAP area (some of which were in the outbound direction from the downtown area), as well as outbound trips from the VNAP area. In addition, the analysis required careful attention as to which MUNI screenline (Northeast or Northwest) would be impacted by trips from the different development potential sites within the VNAP area. The assignment assumptions for the screenlines are tailored to the VNAP's locational relationship to other employment centers and residential districts (for work trips), and centers of attraction (for non-work trips). These were derived specifically for the VNAP for the localized analysis, and do not use the same MUNI screenline assignment assumptions used in the DTPEIR. The full set of assumptions are available for public review at the Office of Environmental Review, 450 McAllister St., San Francisco, CA 94102. The result was a projection of VNAP transit trips at the MUNI Northeast and Northwest screenlines representing a proportion of total transit trips projected in the DTPEIR cumulative analysis.

Table A.13:
Urban Arterial Levels-of-Service

Level of Service	Average Travel Speed	Description of Conditions
A	≥25	Primarily free-flow operations at average travel speeds usually about 90 percent of the free flow speed; vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at intersection is minimal.
B	≥19	Reasonably unimpeded operator at average travel speeds usual about 70 percent of free flow speed; ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.
C	≥13	Represents stable operations. However, ability to maneuver and change lanes in midblock locations may be more restricted than LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of free flow speed. Motorists will experience an appreciable tension while driving.
D	≥9	Borders on a range at which small increases in flow may cause substantial increases in delays approaching intersections, and hence, decreases in speed. Average travel speeds are about 40 percent of free flow speed. This may be due to adverse signal progression, inappropriate signal timing, high traffic volumes, or some combination of these.
E	≥7	Characterized by significant delays approaching intersections and average speeds of one-third the free flow speed or lower. Such operations are caused by some combinations of adverse signal progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.
F	<7	Characterized by extremely low speeds below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with greater delays in approaching intersections.

Source: 1985 Highway Capacity Manual, Table 11-1

Table A.14:
Passenger Levels of Service on Bus Transit

Level of Service	Description	Passengers per Seat
A.	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with less than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00-0.50
B.	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51-0.75
C.	Level of Service C is still in the zone of passenger comfort but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76-1.00
D.	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence as the restricted freedom of movement for passengers requires longer loading times.	1.01-1.25
E.	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur which can rapidly cause operations to deteriorate.	1.26-1.50
F.	Level of Service F describes crush loadings. Passenger comfort and maneuverability is extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51-1.60

Source: Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.

Commercial Transit Assignment. Assumptions regarding assignment of commercial trips on Muni to the geographic quadrants of San Francisco started with those used in the DTPEIR analysis. The assignment assumptions in the VNAP analysis are modifications of the DTPEIR assumptions, taking into account the closer location of the project area to the maximum load points (MLP) of the transit routes contained within the Northwest and Northeast corridors, which determine the location of the MUNI Northwest and Northeast screenlines. The VNAP analysis thus assumed a higher assignment of commercial outbound trips from the project area to the Northeast screenline than what was assumed in the DTPEIR (62.5% of residents living in the Northeast quadrant who take MUNI vs. 45%). To a lesser degree, a modification was made to the Northwest screenline assignment: the VNAP analysis assumed a slightly higher proportion of 62.9% vs. 62.5% assumed in the DTPEIR analysis. Both of the assignment assumptions or the Northeast and Northwest screenlines incorporate a factor to discount linked trips between the C-3 districts, the VNAP area and the greater downtown area.

Inbound commercial transit trips to the VNAP area, generally from the downtown area, were loaded onto the Muni screenlines as well; these would include 50 percent of the non-work trips from all areas of San Francisco except the Northwest quadrant (because trips from the northwest flow counter to the flow of P.M. peak outbound demand), as well as transfer trips from regional carriers in the East Bay and Peninsula.

Residential Trip Distribution. The assignment of VNAP resident transit travel is a complex process. Separate computer runs were made to assign outbound transit travel and inbound transit travel. Only those transit trips generated by the VNAP that contribute to cumulative outbound demand during the P.M. peak commute analysis contained in the DTPEIR were quantified in the VNAP analysis. Sufficient capacity exists during the P.M. peak hour/period to accommodate transit trips associated with the VNAP running in the counter-commute direction. Therefore, trips in the inbound direction did not need to be analyzed.

In summary, the transit trip assignment process involved an analysis of the maximum load point (MLP) locations of individual transit lines directly serving the project area, by screenline, relative to place of residence of VNAP residence (i.e. in Subarea 1 or 2 of the VNAP area) and their places of work in San Francisco (by quadrant of the city) of VNAP residents. Starting with the 24-Hour trip distributions to geographic quadrants of the city which were presented in the "Trip Distribution" section of this appendix, assumptions were made to estimate the amount of travel to/from each of these quadrants on each of the Muni screenlines, based on the location of potential development sites in the project area. The process entailed a complicated accounting of work vs. non-work trips, and inbound vs. outbound trips (to track which ones would contribute to cumulative peak demand), by subarea. The specific numerical assumptions are available for public review in the VNAP EIR file at the Office of Environmental Review, 450 McAllister Street, San Francisco 94102.

VI. Parking Demand Analysis

Parking demand for commercial uses included in the analysis of VNAP development potential were based on assumptions regarding mode split and vehicle occupancy for employees and commercial visitors, and parking turnover rates (parking duration) for commercial visitors.

APPENDIX I: TRANSPORTATION

It was projected that development potential would create 1,737 new office jobs by the year 2000. Modal split by residential distribution and auto occupancy assumptions (based on the DTPEIR) were used to convert employees to employee vehicles, as follows:

Table A.15:
Projected Parking Demand for Office Vehicle (Drive/Rideshare) Modes (2000)

	% of 24-Hour Distribution	% of 24-Hour Distribution by Vehicle Mode		
		Drive Alone	Carpool	Vanpool
San Francisco:				
NE	10.4 = 181 PTE	2.5 = 5 PTE	0.6 = 1 PTE	0
NW	16.5 = 287	14.9 = 43	8.9 = 26	0
SE	12.9 = 224	17.3 = 39	12.2 = 27	1.8 = 4
SW	8.0 = 139	17.1 = 24	6.4 = 9	0.2 = 0
Peninsula	17.7 = 307	20.9 = 64	27.2 = 84	0.2 = 1
East Bay	22.6 = 392	16.6 = 65	12.0 = 47	4.1 = 16
North Bay	9.2 = 160	14.9 = 24	24.8 = 40	4.3 = 9
Internal	2.7 = 47	12.4 = 6	0.7 = 0	0
	100% 1,737 (# employees)	100% 270 (employee trips)	100% 234 (employee trips)	100% 30 (employee trips)

270 drive alone = 270 vehicles
234 carpool ÷ 2.7 vehicle occ. = 87 vehicles
30 vanpool ÷ 11.8 vehicle occ. = + 3 vehicles

Daily Office Employee Parking Demand: 360 vehicles

Retail employee vehicles were calculated in the same manner (see following tables).

Table A.16:
Projected Parking Demand for Retail Vehicle (Drive/Rideshare) Modes (2000)

	% of 24-Hour Distribution	% of 24-Hour Distribution by Vehicle Mode: Drive Alone	Carpool	Vanpool
San Francisco:				
NE	7.6 = 137 PTE	2.5 = 3 PTE	0.6 = 1 PTE	0
NW	12.6 = 227	14.9 = 34	8.9 = 20	0
SE	9.0 = 162	17.3 = 28	12.2 = 20	1.8 = 3 PTE
SW	6.1 = 110	17.1 = 19	6.4 = 7	0.2 = 0
Peninsula	22.8 = 410	20.9 = 86	27.2 = 112	0.2 = 1
East Bay	27.4 = 493	16.6 = 82	12.0 = 59	4.1 = 20
North Bay	11.0 = 198	14.9 = 30	24.8 = 49	4.3 = 9
Internal	3.5 = 63	12.4 = 8	0.7 = 0	0
	100% 1,800 PTE	100% 29	100% 268 PTE	100% 33 PTE

290 drive alone = 290 vehicles
268 carpool ÷ 2.7 vehicle occ. = 99 vehicles
33 vanpool ÷ 11.8 vehicle occ. = + 3 vehicles

Daily Retail Employee Parking Demand: 390 vehicles

Office Employee Demand: 360
Retail Employee Demand: +390

Total Daily Commercial Employee Parking Demand: 750

Parking demand for commercial visitors was calculated as follows:

8,685	total office daily person trip ends (PTE)
x .138	13.8% office daily PTE are visitors[1]
1,200	Office visitor PTEs daily
42,840	Total retail daily PTE
- 7,200	Employee daily PTE
35,640	Retail visitor PTE daily
÷ 2.9	Establishments per trip, linked to trip ratios[2]
12,300	Adjusted retail visitor PTE daily
1,200	Office visitor PTE daily
+12,300	Retail visitor adjusted PTE daily
13,500	Total commercial visitor PTE daily

1 San Francisco Department of City Planning Guidelines for Environmental Review, September 1983
2 San Francisco Department of City Planning. 86.616 ETZ Neighborhood Commercial Rezoning EIR, Survey of Neighborhood Commercial Districts, p. B.3, December 1986.

Table A.17:
Projected Daily Parking Demand for
Commercial Visitor Vehicle (Drive/Rideshare) Mode (2000)

	% of 24-Hour Distribution	% of 24-Hour Distribution by Vehicle Mode	
		Drive Alone	Carpool
San Francisco:			
NE	13.0 = 1755 PTE	37.4 = 656 PTE	19.8 = 347 PTE
NW	26.7 = 3605	45.8 = 1651	11.0 = 397
SE	18.1 = 2445	50.9 = 1245	18.4 = 450
SW	4.2 = 565	47.5 = 268	10.9 = 62
Peninsula	10.5 = 1420	58.8 = 835	28.5 = 405
East Bay	14.7 = 1985	43.9 = 871	7.5 = 149
North Bay	5.8 = 785	43.4 = 341	11.9 = 93
Internal	7.0 = 945	13.8 = 130	5.5 = 52
	13,505 PTE	5,997 PTE	1,955 PTE

5,997 drive alone PTE = 5,997 vehicles
1,955 carpool PTE 2.7 vehicle occ. = + 724 vehicles

Total Daily Commercial Visitor Parking Demand: 6,720 vehicles

6,720 ÷ 2 one-way trips = 3,360 visitor vehicles

3,360 vehicles ÷ 10 daily turnovers per space[3] = 336 commercial visitor spaces

3 Average of one-hour parking duration demonstrated by Dept. of City Planning Neighborhood parking surveys, over a 10-hour business day, prepared for the San Francisco Neighborhood Parking Plan, April 1986.

Total development potential parking demand: 750 + 340 = 1,100 Parking Spaces

DYO/30

The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m^2) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.

The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture have almost 130 sq ft (12 m^2) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m^2). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m^2) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.

Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m^2) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

PHOTOS OF PEDESTRIAN FLOW LEVELS

SOURCE: Pushkarev and Zupan

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m^2). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely uncomfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.

The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m^2) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.

The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m^2) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.

The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m^2) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

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SOURCE: Pushkarev and Zupan

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PHOTOS OF PEDESTRIAN FLOW LEVELS

SOURCE: Pushkarev and Zupan

SAN FRANCISCO AIR POLLUTANT SUMMARY, 1984-1986

STATION: 900 23rd Street, San Francisco

POLLUTANT:	STANDARD	1984	1985	1986
OZONE (O^3) (Oxidant)				
1-hour concentration, ppm/a/				
Highest hourly average	10/b,e/	0.10	.09	.07
Number of excesses of state standard		1	0	0
Expected Annual Excess (federal)/d/		-	.3	0
CARBON MONOXIDE (CO)				
1-hour concentration, ppm				
Highest hourly average	20/b,f/	-	-	-
Number of excesses of state standard		0	0	0
8-hour concentration, ppm				
Highest 8-hour average	9/b,c/	10.8	15/g/	12.6/g/
Number of excesses of state standard		1	3/g/	2 /g/
TOTAL SUSPENDED PARTICULATE(TSP)				
24-hour concentration, ug/m^3/a/				
Highest 24-hour average	100/b,h/	-	-	-
Number of excesses of state standard/g/		5	-	-
Annual concentration, ug/m^3				
Annual Geometric Mean	60/b,h/	60	62	52
Annual excess of standard		Yes	1	0
LEAD (Pb)				
30-day concentration, ug/m^3				
Highest 30-day average	1.5/b/	-	-	-
Number of excesses of standard		-	-	-
NITROGEN DIOXIDE (NO_2)				
1-hour concentration, ppm				
Highest hourly average	0.25/b/	0.14	0.12	0.11
Number of excesses of standard		0	0	0
SULFUR DIOXIDE (SO_2)				
24-hour concentration, ppm				
Highest 24-hour average	0.05/b/	0.03	0.03	0.01
Number of excesses of standard/i,j/		0	0	0

/a/ ppm: parts per million. ug/m^3: micrograms per cubic meter.
/b/ State standard, not to be equaled or exceeded, except for CO standards, which are not to be exceeded.

SAN FRANCISCO AIR POLLUTANT SUMMARY, 1984-1986 (Continued):

/c/ Federal standard, not to be exceeded more than once per year, except for annual standards, which are not to be exceeded.
/d/ Expected Annual Excess is a three-year average of annual excesses of the federal standard.
/e/ The federal one-hour ozone standard is 12 ppm.
/f/ The state one-hour CO standard was revised from 35 ppm to 20 ppm in January 1983. The federal one-hour standard remains 35 ppm. The one-hour CO standard was never exceeded during the year.
/g/ These represent maximum street-level CO levels measured at a micro-scale site on Ellis Street, rather than at the 900-23rd Street monitoring station.
/h/ The California ARB has redefined the state particulate standard to apply to "inhalable" particulates only (i.e., those which have a diameter less than ten microns). The new standards are 50 ug/m^3 for 24-hour averages and 30 ug/m^3 for the annual geometric mean. No data is currently available on the particle size distribution of the TSP sampled at the San Francisco monitoring station.
/i/ Number of observed excess days (measurements taken once every six days).
/j/ Exceeding the SO_2 standard is a violation only if a concurrent excess of the state ozone or TSP standards occurs at the same station. Otherwise, the federal standard of 0.14 ppm applies.

SOURCE: BAAQMD, 1981-1983, Air Quality in the San Francisco Bay Area; and California ARB, 1981 - 1984, California Air Quality Data.

DEPARTMENT OF CITY PLANNING 450 McAllister St. - 5th Floor
(415)558-5260

NOTICE THAT AN
ENVIRONMENTAL IMPACT REPORT
IS DETERMINED TO BE REQUIRED

te of this Notice: June 10, 1983

ad Agency: City and County of San Francisco, Department of City Planning
450 McAllister St. - 5th Floor, San Francisco CA 94102

ency Contact Person: Jim McCormick Tel: (415) 558-526

oject Title: 82.392EZTM: Van Ness Avenue Plan

Project Sponsor: Dept. of City Planning

Project Contact Person: Jim McCormick

oject Address: Van Ness Avenue from Market Street north to the bay

sessor's Block(s) and Lot(s): N/A

ty and County: San Francisco

oject Description: Establishment of the Van Ness Mixed Use District requiring xt and map amendments to the City Planning Code, and a Master Plan amendment opting the Van Ness Avenue Plan as an element of the San Francisco Comprehensive an.

IS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL PACT REPORT IS REQUIRED. This determination is based upon the criteria of the idelines of the State Secretary for Resources, Sections 15081 (Determining Signi-cant Effect), 15032 (Mandatory Findings of Significance) and 15084 (Decision to epare an EIR), and the following reasons, as documented in the Initial Evaluation (initial study) for the project, which is on file at the Department of City anning:

SEE ATTACHED

adline for Filing of an Appeal of this Determination to the City Planning Commis-on: June 20, 1983.

appeal requires 1) a letter specifying the grounds for the appeal, and 2) a 5.00 filing fee.

Alec S. Bash, Environmental Review Officer

APPENDIX III: INITIAL STUDY

Van Ness Avenue Plan Initial Study, 82.392E

Table of Contents

I. PROJECT DESCRIPTION

VAN NESS AVENUE PLAN:
Conservation and Development

Background

In April 1981, the Mayor introduced "A Six-Point Program for Expanding Housing in San Francisco." In her housing program, the Mayor recommended rezoning certain areas near the downtown to residential use to encourage housing development. One of these areas is Van Ness Avenue. In her program, the Mayor envisioned "the future development of the Van Ness/South Van Ness Corridor as a major residential boulevard with mixed-use development stepped back to preserve light and air."

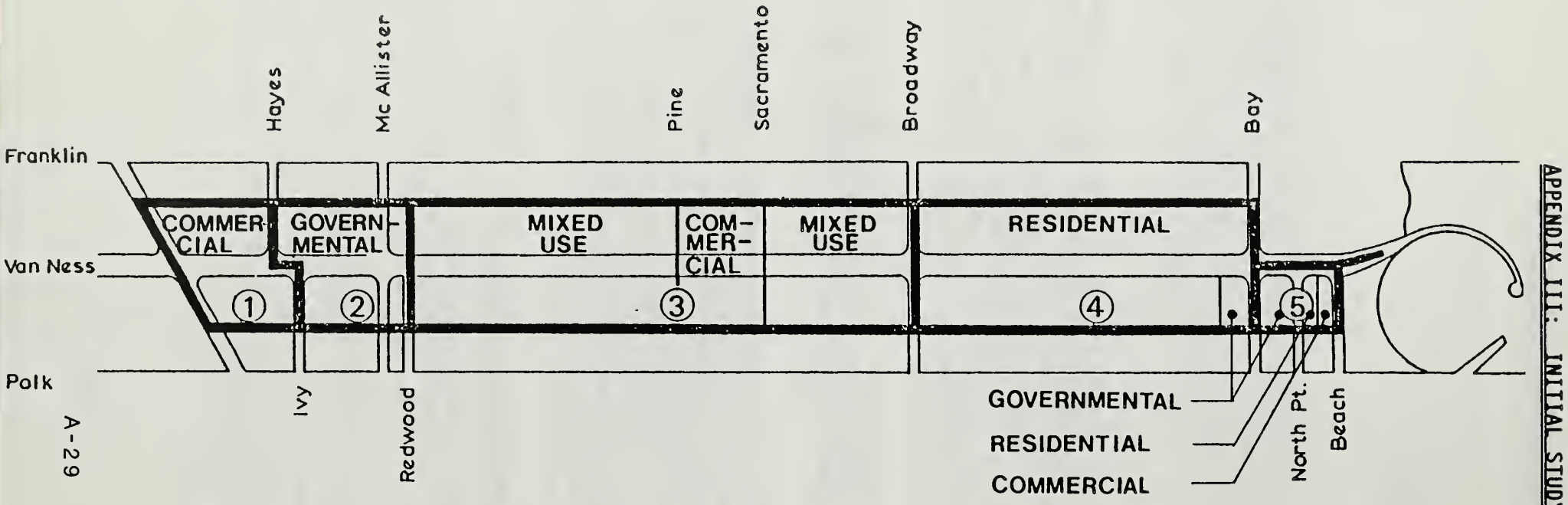
The Van Ness Avenue Plan incorporates a set of land use and urban design policies and controls which are intended to encourage and facilitate new mixed-use and predominantly residential development within the Plan's 63-block area. The plan would need to be adopted by the City Planning Commission as an element of the City's Comprehensive Plan through a Master Plan amendment procedure. The Commission would also establish a Van Ness Avenue Mixed-Use District incorporating text and map amendments to the City Planning Code which must be adopted by the Board of Supervisors.

The Van Ness Avenue area encompasses 63 blocks extending the entire length of Van Ness Avenue from Market Street north to the bay and generally affecting parcels fronting on both sides of Van Ness to the east and the west (please see Figures 1 and 2).

Van Ness maintains a mixed residential and commercial character. Although residential and commercial uses are seen throughout the length of the street, the largest concentration of housing rests in the northern portion of the street and the highest concentration of commercial uses lies in the southern portion (see Figure 1). To better guide new development within the area, five discrete subareas have been identified, some of which are appropriate for major new development while others are more appropr te for conservation with some infill development and conversion of their present use. These five subareas are briefly described below.

Subarea 1: Highrise Office Node (Market to Hayes and Ivy Streets)

Zoned C-3-G (Downtown General Commercial) with a height limit of 320 and 130 feet, this 5-1/2 block area includes two highrise and one midrise office buildings, a number of smaller retail and office buildings and a substantial amount of parking. This subarea features two architecturally significant buildings and a small number of apartments (64 dwelling units). The area is presently underused with respect to its allowable building area. The subarea maintains a juxtaposition between the highrise downtown office district, the Market Street midrise office/retail district and the low-rise residential/commercial neighborhoods to the south and west, and is well-served by major transit and transportation systems.



Existing Predominant Land Uses

FIGURE 1

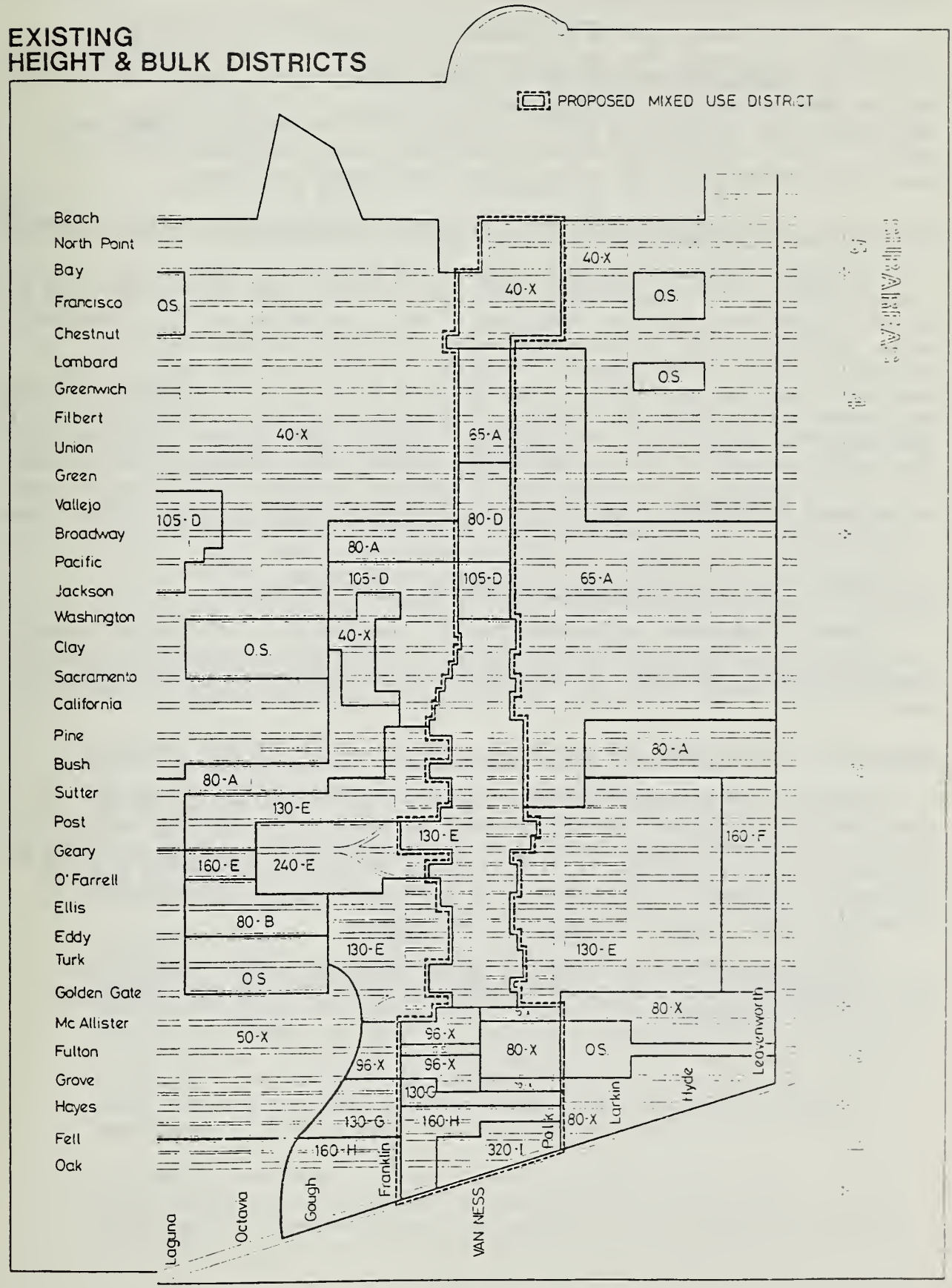

EXISTING
HEIGHT & BULK DISTRICTS
PROPOSED MIXED USE DISTRICT
Beach
North Point
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
Jackson
Washington
Clay
Sacramento
California
Pine
Bush
Sutter
Post
Geary
O'Farrell
Ellis
Eddy
Turk
Golden Gate
Mc Allister
Fulton
Grove
Hayes
Fell
Oak
O.S.
40-X
65-A
105-D
80-D
80-A
130-E
160-E
240-E
80-B
50-X
96-X
130-G
160-H
320-I
80-X
160-F
Laguna
Octavia
Gough
Franklin
VAN NESS
Polk
Larkin
Hyde
Leavenworth

FIGURE 2

Subarea 2: Civic Center (Hayes to Redwood Streets)

The Civic Center area is an important governmental, cultural and ceremonial focal point for the city and its visitors. This approximately six block area encompasses City Hall, the Opera House, Davies Symphony Hall, and the War Memorial/Museum of Modern Art buildings, all of which are architecturally outstanding low-rise structures. Government business and public cultural activities are the predominant uses within Subarea 2. One apartment building with 40 living units lies within the subarea.

Subarea 3: High Density Mixed Use Development (Redwood to Sacramento Streets)

Van Ness Avenue becomes U.S. Highway 101 from Golden Gate Avenue to Lombard Street. As a major thoroughfare this 33-block portion of Van Ness has become a commercial district featuring an auto row, major hotels, restaurants, and a variety of other businesses serving city residents and visitors. The subarea is zoned a C-2 (Community Business) Use District and most of the subarea is designated a 130-E Height and Bulk District. The subarea's designated height limit declines from 130 feet to 80 feet along Van Ness as it approaches the Bay. Few buildings have been developed to this limit; most of the buildings being 2, 3 or 4 stories in height. The California Street cable car line terminates at Van Ness and California, where one is afforded a view of the East Bay foothills and the skyline framed by the upper and lower slopes of Nob Hill.

Subarea 4: Housing Conservation (Broadway to Bay Street)

Zoned C-2 and RM-1 (Mixed Residential, Low Density), with height limits diminishing from 80 to 40 feet, the primary use is medium-density apartment housing, although a number of older houses have been converted to commercial use.

Subarea 5: Visual Node and Open Space (Bay Street to the Bay Shoreline)

Subarea 5 is a short, two-block stretch from Bay Street to the San Francisco Bay shoreline. It is, however, an important recreation and open space resource for the city and its visitors and offers a spectacular view of the Bay and its islands and the hills beyond. The visitor to this area is afforded a panoramic view, moving from an urban cityscape to the more soft forms of the Bay waters and the Marin headlands.

The proposed land use and urban design policies and regulations are briefly described below and will be described in detail in the subsequent environmental document.

Proposed Policies

- o Encourage High Density Mixed Use Developments.
- o Maximize Residential Development within the Van Ness Avenue Area.
- o Preserve identified architecturally significant buildings. Encourage adaptive reuse.
- o Conserve existing moderate-density housing resources.
- o Create and maintain an attractive, interesting pedestrian environment.
- o Encourage transit ridership by area residents, workers and shoppers.
- o Create and maintain safe and attractive residential environments.

Proposed Controls

- o Establish a Van Ness Avenue Mixed-Use District which incorporates variable density and land use controls.
- o Designation of Subarea 3 (from Redwood Street to Broadway) as a Residential-Commercial Combined, High-Density District. Subareas 1, 2 and 5 would remain as they presently exist with the exception that retail activity would be required along the groung floor Van Ness frontage, and Subarea 4 would be reclassified from a C-2 to an RC use district with a 1:400 medium residential density (RC-3 equivalent).
- o Maintain existing height limitations, with the exception of Subarea 1 and portions of Subarea 2 which would have lower height limits.
- o Revise bulk limitations.
- o Establish vertical land use controls for ground and upper level uses of buildings.
- o Amend residential density controls to allow higher density development.
- o Relate the amount of commercial development allowed to the amount of residential space provided within Subarea 3. One square foot of commercial space would be allowed for every three square feet of residential space provided. The existing Floor Area Ratio (FAR) control for commercial density would be replaced with this 3:1 ratio of residential to commercial development. Within Subareas 1 through 3, ground floor retail space would be required and this commercial space would be included as part of the site's allowable commercial development. Housing would not be required within Subareas 1 or 2.
- o Provide relaxation of vertical land use controls, parking requirements and on-site housing requirements, with conditional use authorization, when necessary for preservation and adaptive reuse of identified significant buildings fronting on Van Ness Avenue.

- Require buildings to be built to the property line along Van Ness Avenue with a 40 to 60 foot building wall along Van Ness and an average 30-foot setback above this 40-60 foot height.

- Require buildings with frontage along Pine, Sacramento, Clay and Washington Streets to provide a 30 foot setback at the 40 to 60 foot building wall along the east-west street frontage in addition to the required 30 foot setback along the Van Ness frontage, in order to preserve significant view corridors. Because California is a wide street, a 15 foot setback along the California Street frontage at the 40 to 60 foot height would be adequate to preserve significant views.

- Require new development and major renovation of existing buildings to contribute incrementally to street and sidewalk treatments such as plantings, sidewalk furniture, paving and lighting improvements.

II. POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS

Potentially significant environmental impacts associated with project implementation include the following issues which will be addressed in the Environmental Impact Report prepared for the proposed Van Ness Avenue Plan and associated Master Plan and City Planning Code amendments.

- Effects on transportation systems and facilities, particularly transit service and local roadway capacity.

- Land use and population.

- Effects on cultural and/or historic resources.

- Effects on air quality, climate and noise environments.

- Effects on energy and natural resources.

Potential environmental issues associated with the project that have been determined in this Initial Study to be insignificant, and, therefore not to be addressed in subsequent environmental documentation for the project, include: Relationship of the project to the policies and objectives in the City's Comprehensive Plan; visual quality and urban design; utilities and public services; biology; land, water, and hazards.

III. ENVIRONMENTAL EVALUATION CHECKLIST (INITIAL STUDY), THE VAN NESS AVENUE PLAN, 82.392E

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS.
Could the project:

	yes	no	discussed
1.Require a variance, special authorization, or change in the City Planning Code or zoning map?	X		X
*2.Conflict with the Comprehensive Plan of the City and County of San Francisco?	X		X
*3.Conflict with any other adopted environmental plans and goals of the city or region?		X	

The proposed Van Ness Avenue Plan policies and objectives are consistent with the policies and objectives presented in all elements of the City's Comprehensive Plan (Master Plan), with the exception of one section of the Civic Center Plan, an element of the Comprehensive Plan (1974), which recommends administrative use for the block north of City Hall fronting on McAllister Street between Van Ness and Polk Street. The Van Ness Avenue Plan differs from the Civic Center Plan in that it recommends retention of an existing apartment building in residential use at the northeast corner of Van Ness and McAllister. The Department proposes to amend the Civic Center Plan to recommend residential use for that property. The Van Ness Avenue Plan is proposed to be adopted by the City Planning Commission as an element of the Comprehensive Plan. The land use and urban design controls set forth in the proposed Van Ness Avenue Mixed-Use District would be adopted as text and map amendments to the City Planning Code. The plan would not conflict with any other adopted environmental plan or goals of the city or region.

*Derived from State EIR Guidelines, Appendix G, normally significant effect.

B. ENVIRONMENTAL EFFECTS. Could the project:	Yes	No	Disc.
1. Land Use.			
a. Disrupt or divide the physical arrangement of an established community?	___	X	X
b. Have any substantial impact upon the existing character of the vicinity?	X	___	X

The proposed project would not change the types of land uses found within the study area. Under the proposed plan, land use patterns would remain the same although the intensity of uses (density) would change within Subareas 1 through 3 from the existing moderate to medium density commercial and residential uses in low-rise buildings to high-density upper level residential uses over moderate to low density lower level commercial uses in midrise buildings (See Figures 3 and 4). The spatial patterns of existing communities would not change. The specific controls for each of the five subareas would be expected to preserve and conserve physical/spatial arrangements of these communities.

Table 1 compares the existing level of development to the existing allowable level of development (that which would be allowed at full build-out under existing zoning) and the proposed Plan's maximum level of development. It should be noted that the Van Ness Avenue area's existing level of development is far less than is allowed under present height, bulk and density controls, and that while the proposed zoning amendments are intended to induce new development, it is not anticipated that every parcel will be developed to its maximum allowable building envelope. Therefore, the full build out or maximum development scenario presented in this environmental assessment should be considered a "worst case" level of development; actual development and associated impacts would be expected to fall somewhere between the existing setting and the worst case or maximum development scenario associated with the Plan. In all cases the intensity of commercial activity would be greater than presently exists and less than is allowed under present zoning controls. Under the proposed Plan, residential densities would be greater than presently exist and is expected to be greater than what would be expected to be developed under present zoning because of the market trend to develop commercial space rather than residential space where solely commercial development is allowed.

Land use issues associated with the proposed plan will be discussed in detail in the subsequent EIR.

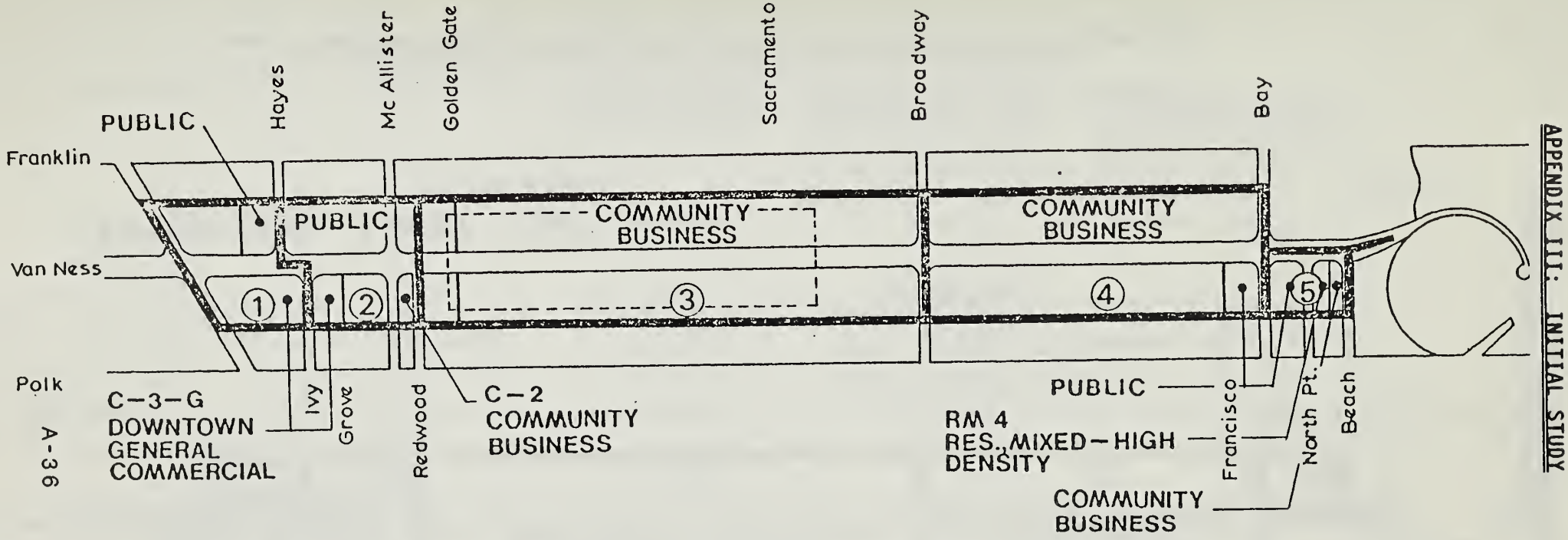
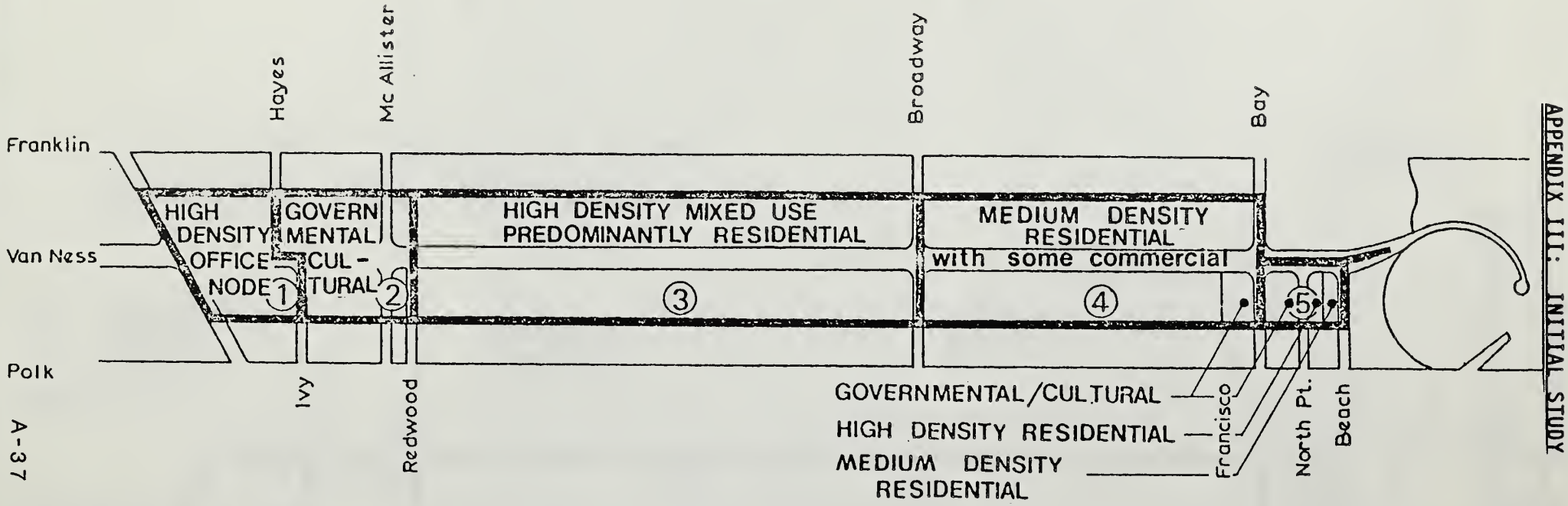

SUBAREAS ① Through ⑤
Hayes
Mc Allister
Golden Gate
Sacramento
Broadway
Bay
Franklin
Van Ness
Polk
PUBLIC
PUBLIC
COMMUNITY BUSINESS
COMMUNITY BUSINESS
①
②
③
④
⑤
C-3-G DOWNTOWN GENERAL COMMERCIAL
Ivy
Grove
Redwood
C-2 COMMUNITY BUSINESS
PUBLIC
RM 4 RES., MIXED-HIGH DENSITY
COMMUNITY BUSINESS
Francisco
North Pt.
Beach
Existing Use Districts
AUTOMOTIVE SPECIAL USE DISTRICT

FIGURE 3



Proposed Land Uses

BY SUBAREA

FIGURE 4

Table 1: COMPARISON OF ESTIMATED DEVELOPMENT POTENTIAL UNDER EXISTING CONDITIONS, MAXIMUM ALLOWABLE UNDER EXISTING ZONING, AND MAXIMUM ALLOWABLE UNDER THE PROPOSED VAN NESS AVENUE PLAN

	Existing Conditions (10:1 FAR, 1:200 density, 1:4 res. pkg; 1:500 comm. pkg.)	Maximum Development under Existing Zoning -- assuming full commercial buildout as office space (10:1 FAR, 1:200 density, 1:4 res. pkg., res. pkg.,1:500 comm. pkg.)	Maximum Development under the proposed Van Ness Avenue Plan (3:1 res. to comm. dev.,variable density, avg. 800 sq.ft. unit size, 1:4 1:500 comm. pkg.)
Land area	3,577,547	3,577,547	3,577,547
Building area			
office space in square feet	2,238,422	19,225,811	5,300,688
retail (ground floor uses and existing hotels)	4,535,748	1,023,295	2,752,224
residential	2,940,579	1,333,507	7,458,457
public	2,119,188	2,119,188	2,119,188
commercial parking	715,515	12,149,463	3,342,089
average areawide commercial density excluding required parking (Floor Area Ratio - FAR)*	2.7:1	7.6:1	2.2:1
No. dwelling units	2,428	553	7,790
average areawide residential density**	1:200	1:230	1:307

* Commercial building area, excluding parking, divided by available commercial land area.

** Residential land area divided by number of units.

2. Visual Quality

	Yes	No	Disc.
*a. Have a substantial, demonstrable negative aesthetic effect?	___	X	X
b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?	___	X	X
c. Generate obtrusive light or glare substantially impacting other properties?	___	X	X

The project incorporates a number of urban design policies and controls which are expected to guide new development in such a way as to make buildings more compatible with existing outstanding buildings as well as the scale of existing structures in the area and surrounding neighborhoods; to transform the avenue into an attractive and pleasant residential environment; to fulfill the objectives and policies presented in the Urban Design Element of the City's Comprehensive Plan; and to preserve and enhance existing scenic views seen from public spaces in the area, such as the Civic Center Historic District, the Pine, California, Sacramento, Clay and Washington Streets view corridors, and views of the Bay shoreline and headlands beyond seen from the foot of Van Ness Avenue. (Please refer to Table 2 for a list of proposed Urban Design policies.)

The Plan proposes to lower height limits in Subarea 1 and portions of Subareas 2 and for the most part does not change existing height limits north of Turk Street. The Plan proposes policies which are intended to preserve and enhance existing views of the bay and hilltops from the site and surrounding neighborhoods. Under existing or proposed zoning, individual buildings may or may not obstruct views from adjacent buildings or generate light or glare affecting other properties; these effects would be evaluated on a project-specific basis as new building permit applications are reviewed by the Department. A proposed 20 foot side setback for building towers would preserve light and air for residents of abutting buildings.

Table 2: Proposed Areawide Urban Design Objectives and Policies

For further discussion of these policies please refer to the Van Ness Avenue Plan pp. 22-31 which is incorporated herein by reference.

URBAN DESIGN

Visual Form

Areawide Objectives and Policies

OBJECTIVE 1: To enhance the Natural Land Forms along the Van Ness Corridor with new development.

Policy 1: Maintain height controls which, for the most part, allow sufficient density to encourage and facilitate new development while emphasizing the natural land forms of the area.

OBJECTIVE 2: To Maintain and Enhance the Street's Visual Form and Resources.

Policy 1: Encourage new development closer to the height limit.

Policy 2: Strengthen the area's existing scale as well as emphasize the predominant height of significant buildings by maintaining in the high density mixed use development area (Subarea 3), a generally uniform street wall with a deep setback above this street wall.

Policy 3: Conform building shapes to bulk controls. In higher height districts require conformity to controls which are designed to encourage sculpturing and articulation of building towers, particularly at the upper levels.

(For discussion of proposed bulk controls and measurement, building forms, height allowances and setbacks, please see Van Ness Avenue Plan pp. 25-29 which is incorporated herein by reference.)

Policy 4: Incorporate exterior building design and treatments in new development which would complement and enhance the street's existing unique Renaissance/Beaux Arts architectural identity.

Policy 5: For large parcel developments with greater than half a block frontages, interrupt facade patterns with a change in architectural treatments, such as changes in fenestration and materials, at least at the half-block interval.

Policy 6: Incorporate design features (such as upper level canopies) on new developments and renovations when necessary to serve as a wind barrier.

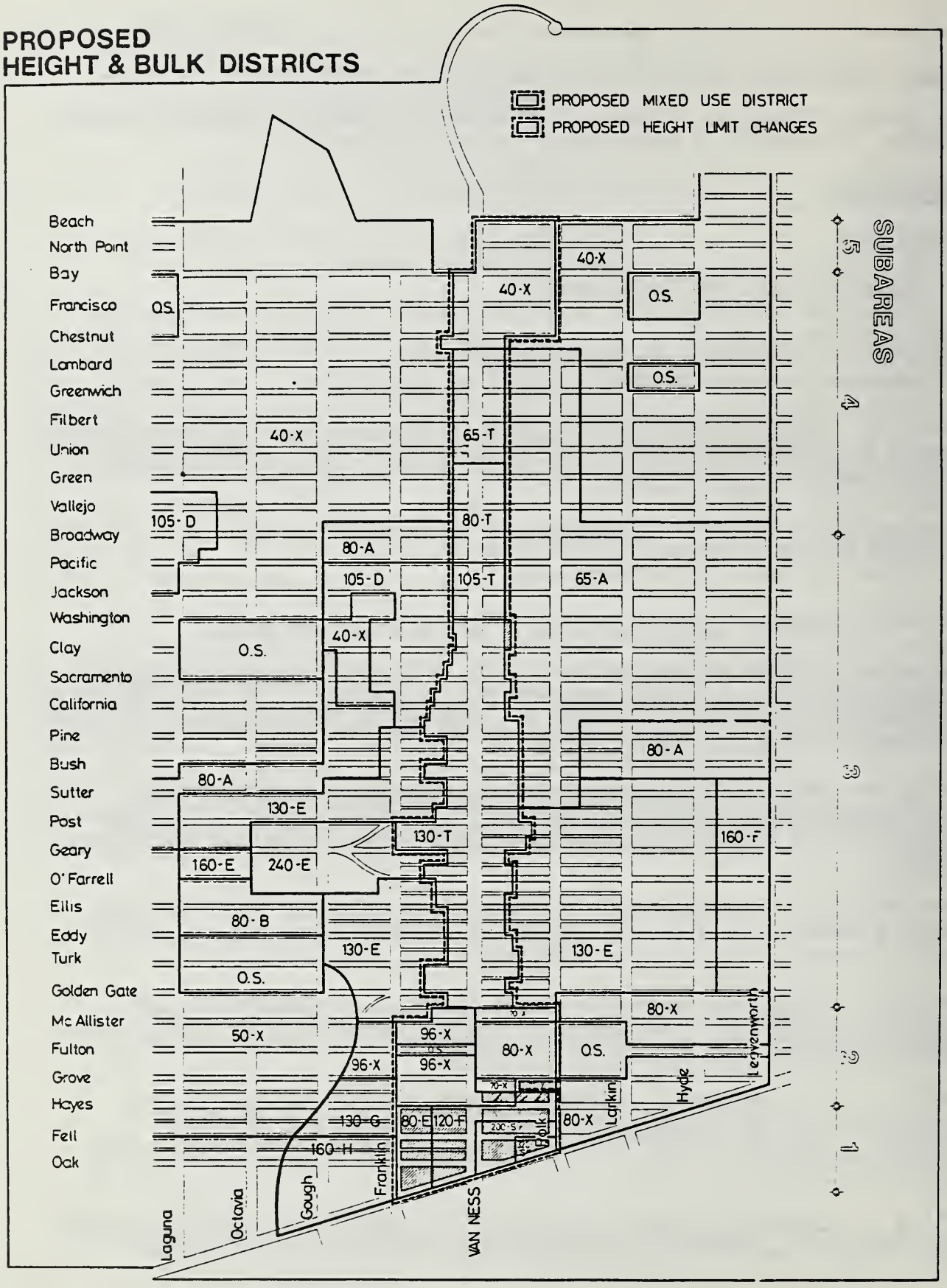

PROPOSED
HEIGHT & BULK DISTRICTS
PROPOSED MIXED USE DISTRICT
PROPOSED HEIGHT LIMIT CHANGES
Beach
North Point
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
Jackson
Washington
Clay
Sacramento
California
Pine
Bush
Sutter
Post
Geary
O'Farrell
Ellis
Eddy
Turk
Golden Gate
Mc Allister
Fulton
Grove
Hayes
Fell
Oak
Laguna
Octavia
Gough
Franklin
VAN NESS
Polk
Larkin
Hyde
Leavenworth
SUBAREAS
5
4
3
2
1
O.S.
40-X
65-T
80-T
105-D
80-A
105-T
65-A
130-E
130-T
160-F
160-E
240-E
80-B
50-X
96-X
80-X
130-G
80-E
120-F
160-H

FIGURE 5

Streetscape/Building Facade Treatment

OBJECTIVE: To Create and Maintain an Attractive, Interesting Streetscape with a Human Scale.

Policy 1: Encourage vertical and horizontal articulation of the facade on bases of buildings and incorporate detail at ground level through change of material, color, texture and architectural projections. Provide windows with clear glass to enable the pedestrian to view interior commercial activities.

Policy 2: Provide in interior spaces such pedestrian amenities as plazas, places to sit, planting areas, fountains or cafes.

Policy 3: Incorporate architectural treatments in new buildings which would be sympathetic to the scale, form and proportions of older buildings, particularly those of outstanding quality.

Policy 4: Frame auto-oriented uses (such as gas stations) with a platform that relates harmoniously with nearby facade patterns and provide adequate ventilation and fire prevention design features.

Policy 5: Discourage bridges over minor streets or other public right-of-ways.

Policy 6: Design signs on new and renovated buildings to create a positive human scale along the street.

Open Space and Greenspace

OBJECTIVE: To develop a Greenspace System within the Sidewalk and Street Median Space which would Create a Distinctive Identity for the Avenue.

Policy 1: Incorporate both private and common open space and greenspace elements into new residential development and renovation of existing buildings to create a more attractive residential environment.

Policy 2: Assure that new development and major renovation contributes to the creation of an attractive street and sidewalk space by incor- porating landscape vegetation, sidewalk pavement treatment, street lighting, and furniture in adjacent public spaces.

Subarea Urban Design Objectives and Policies

Subarea 2: Civic Center (Hayes to Redwood Streets)

Policy 1: Strengthen the special space along Van Ness Avenue between Grove and McAllister Streets formed by the setback of City Hall and the Opera House/War Memorial buildings.

Policy 2: Strengthen the special ceremonial character of the Civic Center area.

Subarea 3: (Redwood to Broadway)

Policy 1: Assure that new development and major renovation at the Van Ness/California Street intersection are designed to minimize adverse wind conditions and maximize sun exposure at pedestrian level, particularly in the vicinity of the cable car terminus.

Policy 2: Preserve significant view corridors along east-west thoroughfares.

3. Population

	Yes	No	Disc.
*a. Induce substantial growth or concentration of population?	X		X
*b. Displace a large number of people (involving either housing or employment)	X		X
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?		X	X

The area's resident population would be expected to increase from about 5,300 persons to about 17,500 persons, assuming retention of about 2,160 existing units and development of 5,825 new units (based on an average 800 gsf living unit and an average 2.19 persons per unit). Direct permanent employment would increase from about 23,000 to up to 32,300 workers.

Plan adoption and implementation is expected to stimulate new investment in the Van Ness Avenue area, particularly in the area of housing. Based on present and historical investment patterns for the area, it can be expected that new investments will occur slowly and incrementally over a 5 to 10 year period. The Plan would be expected to have a growth-inducing effect within the project area and may stimulate investment in abutting low-density properties where present zoning permits such development. Neighboring Pacific Heights and/or Polk Gulch/Tenderloin areas may experience similar yet slower growth-inducing effects although this is expected to be more directly related to the city's overall demand and market pressure for new housing development. The Plan may attract residential development which may otherwise have located elsewhere in the city or region. The Plan may attract retail and minimal secondary office space investments which may otherwise have been directed in the Downtown or South of Market areas or neighborhood commercial districts throughout the city.

The Plan is intended to satisfy a portion of the city's existing demand for housing as well as a portion of the anticipated demand generated by people attracted to the city by new office employment associated with recently approved office development in the Central Business District (CBD). Development under the policies and controls proposed by the Plan could result in the displacement of approximately 268 existing living units in 16 buildings which are located on parcels which have a low ratio of improvements to land value and are thereby considered "soft sites" and vulnerable to development, while 2,160 units would be conserved and 5,825 new units could be constructed for a net areawide housing supply of 7,985, representing a 328% increase over existing housing resources. The effects of resident population and employment growth will be addressed in the EIR.

4. Transportation/Circulation.

	Yes	No	Disc.
*a. Cause an increase in traffic which is substantial in relation to existing traffic load and capacity of the street system?	X	___	X
b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	___	X	X
c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	X	___	X
d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	X	___	X

Use of transportation systems and resources would increase with new development. The effects of this increased demand on existing transportation systems will be addressed in the EIR.

5. Noise.

	Yes	No	Disc.
*a. Increase substantially the ambient noise levels for adjoining areas?	X		X
b. Violate Title 25 Noise Insulation Standards, if applicable?		X	X
c. Be substantially impacted by existing noise levels?		X	X

Increased traffic associated with new development would increase the ambient noise level within the Van Ness Avenue area. The present ambient noise level along Van Ness Avenue is approximately 75 CNEL*, primarily due to noise generated by buses, trucks and motorcycles.(1)

A 75 CNEL is roughly equivalent to a $75L_{dn}$** which is considered a "loud" noise environment for residential uses by the Environmental Protection Element of the Comprehensive Plan. The element requires new housing development and new office development within this noise environment to incorporate adequate noise insulation features in project design. New housing development would be subject to Title 25 noise insulation standards and interior noise due to exterior sources must not exceed a 45 CNEL. In addition to Title 25 standards, the Plan recommends several design features which would reduce the physical and psychological effects of exterior noise along Van Ness; these include a 1 to 5 level building podium with commercial space, a 30-foot setback above the commercial podium, street trees within the sidewalk and street median strip trees which canopy over the street, tall planting and/or canopies within the setback open space area over the podium, and solaria balconies on residential windows facing Van Ness Avenue. Although openable windows are recommended for energy conservation, these windows can be double-paned to achieve Title 25 standards when closed. The effects of increased traffic associated with new development on the ambient noise environment will be addressed in the EIR.

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(1) Charles M. Solter Associates, Inc., May 13, 1981 letter to John Pihl, Bull, Field, Volkmann, Stockwell.

* CNEL: Community Noise Equivalent Level; similar to L_{dn} except that sound level measurements taken between 7 p.m. and 10 p.m. are weighted 5 dBA higher than daytime sounds in addition to the 10dBA 10 P.M. to 7 a.m. weighting.

** L_{dn}: An averaged sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the greater annoyance of nighttime noises. Noise between 10 p.m. to 7 a.m. is weighted 10 dBA higher than daytime noise.

6. Air Quality/Climate

	Yes	No	Disc.
*a. Violate any ambient air quality standard or contribute to an existing or projected air quality violation?	X		X
*b. Expose sensitive receptors to substantial pollutant concentrations?		X	X
c. Permeate its vicinity with objectionable odors?		X	X
d. Alter wind, moisture, or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?		X	X

New development would be expected to increase vehicular traffic in the area and would result in an undetermined amount of degradation of the local air quality. The effects of new development on local and regional air quality goals and standards will be discussed in the EIR

The Van Ness area climate is generally warm and temperate, lying within one of the city's "sun belt" areas, and experiences gentle to moderate southwesterly winds in the afternoons.

Development of highrise buildings in Subarea 1 and midrise buildings in Subarea 3 may create adverse wind effects on surrounding properties.

The Plan would require each development project to analyze and mitigate any potential adverse wind effects of the project on nearby and down wind pedestrian spaces and upper level open spaces. The Plan would not allow land uses which are known to produce objectionable odors, such as food processing, sewage treatment plants, or other such uses.

7. Utilities and Public Services

	Yes	No	Disc.
*a. Breach published national, state or local standards relating to solid waste or litter control?	___	X	X
*b. Extend a sewer trunk line with capacity to serve new development?	___	X	X
c. Substantially increase demand for schools, recreation, or other public facilities?	___	X	X
d. Require major expansion of power, water, or communications facilities?	___	X	X

Police and Fire Protection

The project area is served by the San Francisco Police Department's Northern Station located at 841 Ellis Street between Van Ness and Polk Street. The Department's Northern Station services the neighborhoods of Russian Hill, Polk Gulch, Tenderloin, Civic Center, Western Addition, Duboce Triangle and portions of lower Pacific Heights. The area served by the Northern Station ranks high in reported crime incidence compared with other areas of the city. Within the service area, more crimes were reported east at Van Ness and South of Washington Street between Van Ness and Leavenworth. The Van Ness Avenue area is served by a 24-hour auto patrol with an emergency response time of three to five minutes./1/

The Plan would increase population and personal property in the area and would therefore increase the potential for crime. Plan recommendations for internal security and safety features within individual projects would be expected to reduce the potential incidence of crime. (See Table 3, page 27.) San Francisco Police Department's existing personnel and equipment at the Northern Station could adequately serve the plan's projected development.1/

There are eight San Francisco Fire Department stations serving the Van Ness Avenue area. Four of the stations carry ladders, in addition to hoses, which can service buildings of up to nine stories. For taller buildings, charter helicopter companies are available to assist the Fire Department's firefighters and equipment. Response time within the study area is less than three minutes. Water pressure is adequate for all hydrants within the area./2/

Increased day and nighttime population would induce a corresponding increase in use of public services and utilities. The project would increase the building area and number of persons using these spaces and thus may increase the number of fire incidents in the area. New buildings would incorporate more extensive fire protection measures than most older buildings in the area and would comply with more stringent current fire protection codes. Existing water distribution systems and water pressure for fire-fighting various locations along Van Ness are adequate to serve the maximum allowable development under the proposed Plan. There are eight fire stations which serve the project area.

Emergency response time to any location along Van Ness Avenue would remain within 3 minutes. Existing personnel and equipment would adequately serve the plan's proposed development, except in the case of a major citywide disaster or in the case of a number of simultaneous highrise fires.2/ However, since new highrise buildings must comply with the life safety provisions of the San Francisco Building Code, most fires in these buildings can be expected to yield to minimum response by the Fire Department.

Schools

In addition to a number of private schools, there are seven elementary, three middle and two public high schools serving school-age children living within the study area. As individual schools reach capacity, students are transferred to other, less utilized schools within the district. Elementary school children are provided school bus service, while middle and high school students generally take the Muni./3/

Under the proposed Plan, up to 5,825 new housing units could be added to the area's existing housing stock representing an estimated increase in resident population of about 12,760 persons. Because of high land and construction costs, the new units will probably be expensive, and it is expected that few large size households with more than two children would be able to afford them. It is anticipated that most of the new units will be occupied by two working adults. Consequently, the units will probably be designed to accommodate the smaller household size (1 to 2 bedrooms). New development can be expected to attract a small, yet undetermined number of households with school-aged children. These children could be served by the San Francisco Unified School District without requiring additional personnel or equipment.3/

Open Space

There are 10 public parks and/or recreational facilities located within two to four blocks of Van Ness Avenue; these include:

- George R. Moscone Rec. Center at Bay/Chestnut/Webster/Laguna
- Lafayette Park at Gough/Laguna/Washington/Sacramento
- Allyne Park at Gough/Green
- Jefferson Square/Hayward Playground at Eddy/Golden Gate/Gough/Laguna
- Russian Hill Park at Bay/Larkin/Hyde
- Alice Marble Tennis Courts/George Sterling Glade at Hyde/Larkin/Lombard/Greenwich
- Helen Willis Playground at Broadway/Larkin
- Civic Center Plaza at Polk/Larkin/McAllister/Grove
- Fort Mason at Bay/Van Ness
- Aquatic Park at Hyde Street Pier

Of the 10 facilities, the George Moscone Center has the greatest number of recreational facilities and is the most heavily used, followed by the Alice Marble and Helen Willis Tennis Courts. Hayward Playground offers active recreational facilities, including two night lit baseball diamonds, and is well used. The Lafayette, Allyne, Sterling, Russian Hill Parks and Jefferson Square are oriented towards "passive" recreation and are not as heavily used. The Civic Center, Fort Mason, Aquatic Park/Hyde Street Pier facilities are well-utilized yet have capacity to accommodate more users./4/

Increased employee and resident population would generate a demand for additional recreational and open space facilities, such as sunlit plazas or courtyards, parks with sitting areas and/or clubs with indoor recreation facilities. The Plan requires the provision of open space resources for individual development projects. Areawide public park resources would be adequate to serve the predominantly adult resident population associated with new housing development.4/

The Plan would result in a net increase in energy consumption. The Plan recommends that individual projects incorporate energy conservation designs, construction materials and operating procedures which would exceed State Title 24 energy conservation standards. The energy effects associated with new development would be evaluated on a case-by-case basis during the environmental review and/or permit review process for individual projects.

Water and Sewer Service

Water service is provided by the San Francisco Water Department. The water distribution system is well developed within the project area with 8 to 16 inch mains serving most of the area. The distribution system is considered by the Water Department to be sufficient for domestic use and has been sized to accommodate a much higher level of development. Sewer service is provided by the City's Department of Public Works./5/

The Plan would allow up to about 4.5 million gsf of new retail or office space, and about 5,825 new dwelling units. This would be expected to result in a net increase in water use of about 2 million gallons per day and a cumulative demand of about 3.7 million gallons per day. The existing water supply, distribution system and water pressure has been determined to be adequate to serve this level of new development within the project area.5/

The sewer lines on Van Ness Avenue are a combination of century old sewers and newer ones with the older ones not necessarily representing more of a maintenance problem than the new ones. In dry weather, sewage capacity is always sufficient. In wet weather, Van Ness has no special sewage problems but does contribute to a citywide overflow problem which is presently being corrected by the City's Clean Water Program./6/

The amount of wastewater generated by new development would be approximately the same as the amount of water used, as described above. Sewer capacity serving the study area would be adequate to serve the plan's anticipated new development.6/ New development would generate a net increase of approximately 44 tons of solid waste per day representing approximately 16,000 tons per year for a cumulative total (new and remaining existing development) of 42,267 tons per year. Adequate collection services

could be provided and would probably occur daily as at present.7/ Disposal effects would depend on the eventual selection of a disposal method and/or site for the city's solid wastes.

FOOTNOTES

Utilities and Public Services

1/ Sergeant Paul Liebert, Planning and Research Division, San Francisco Police Department, telephone communication, October 20, 1982.

2/ Chief Edward Phipps, San Francisco Fire Department, telephone communication, October 20, 1982.

3/ Mr. Walker, Enrollment Officer, San Francisco Unified School District, telephone communication, November 1, 1982.

4/ Jim Rogers, Assistant Superintendent of Parks, San Francisco Recreation and Park Department, telephone communication, September 20, 1982.

5/ Cyrus Wentworth, Estimator, San Francisco Water Department, telephone communication, October 20, 1982.

6/ Mervin Francies, engineer, San Francisco Clean Water Program, telephone communication, September 20, 1982.

7/ Fiore Garbarino, Office Manager, Golden Gate Disposal Company, telephone communication, November 1, 1982.

8. Biology.

	Yes	No	Disc.
*a. Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	___	X	X
*b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	__	X	X

The project area is covered with impervious surfaces or landscape vegetation. There are no known endangered plants or animals within the project area. The Project would not affect any plant or animal life or habitat.

9. Geology/Topography

	Yes	No	Disc.
*a. Expose people or structures to major geologic hazards?	___	X	X
b. Change substantially the topography or any unique geologic or physical features of the site?	___	X	___

Van Ness Avenue lies at the bottom of the slopes between Nob Hill and Cathedral Hill/LaFayette Park Hill. The Avenue extends approximately 12,000 feet in a north-south orientation with the Market Street edge at about 40 feet elevation rising to about 190 feet at Washington Street and then gently decreasing to sea level at the Bay shoreline.

The project area is susceptible to ground shaking ranging from strong to very strong in magnitude during seismic activity with a small area at the Van Ness/Broadway intersection susceptible to violent ground shaking (John A. Blume Associates, 1974).

Damage to new housing within the area due to seismic activity would be less than would occur to existing, older buildings due to the seismic safety requirements of the San Francisco Building Code. Most damage resulting from seismic activity would be associated with older, existing buildings built prior to the adoption of seismic safety codes (1948).

10. Water

	Yes	No	Disc.
*a. Substantially degrade water quality, or contaminate a public water supply?	___	X	___
*b. Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	___	X	___
*c. Cause substantial flooding, erosion or siltation?	___	X	___

As the area is already urbanized, existing drainage systems and storm drains would serve new development. Specific impacts to local mains serving individual projects would be assessed on a case-by-case basis under separate project-specific environmental review. Please refer to Item 7 of this checklist for a discussion of water service impacts.

11. Energy/Natural Resources

	Yes	No	Disc.
*a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	___	X	X
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	___	X	___

The Plan encourages energy conservation related to transportation impacts by proposing high-density housing near employment centers and along transit corridors. See Item 7 of this checklist of a discussion of water service impacts.

The energy impacts associated with new residential and commercial development will be discussed in the EIR.

12. Hazards.

	Yes	No	Disc.
*a. Create a potential public health hazard, or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	___	X	___
b. Interfere with emergency response plans or emergency evacuation plans?	___	X	X
c. Create a potentially substantial fire hazard?	___	X	___

Increased local population may create additional congestion in emergency evacuation. The City's Emergency Service Program does not anticipate any

problems in serving growth in residential or employee population associated with the Plan./1/

/1/ Tom Jenkins, San Francisco Emergency Service Program, Telephone Communication, November 8, 1982.

13. Cultural.

	Yes	No	Disc.
*a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	X		X
*b. Conflict with established recreational, educational, religious or scientific uses of the area?		X	X
c. Conflict with preservation of any buildings of city landmark quality?		X	X

The Plan proposes a number of policies and incentives for preservation of identified significant buildings. Existing recreational, educational, religious or scientific uses would be allowed to remain. The Plan proposes a number of policies intended to preserve and enhance the special cultural and physical/spatial resources of the five distinct subareas within the broader project area. The effects of new development on historic, architectural and culturally significant buildings will be discussed in the EIR.

C. OTHER

	Yes	No	Disc.
Require approval of permits from City departments other than DCP or BBI, or from regional, state or federal agencies?	X		X

The Plan's implementing text and map amendments to the City Planning Code would need to be adopted by the Board of Supervisors.

D. MITIGATION MEASURES:	Yes	No	N/A	Disc.
1. If any significant effects have been identified, are there ways to mitigate them?	X			X
2. Are all mitigation measures identified above included in the project?	X			X

A number of plan policies have been designed and included in the plan to serve as mitigation measures for potential environmental impacts associated with new development along Van Ness Avenue; these are summarized in Table 4. Other mitigation measures will be identified in the EIR, as appropriate.

Table 3: Summary of Plan Policies Designed to Serve As Mitigation Measures for Anticipated Impacts Associated with New Development.

The following goals, as well as relevant environmental standards presented in the City's Comprehensive Plan, served as measuring tools for evaluating the impacts and appropriateness of alternative land use and urban design concepts considered during the planning analysis which preceded the Plan.

The plan is based on four basic goals.

- o To encourage high density residential development within mixed use (residential-commercial) projects along Van Ness Avenue.
- o To preserve and enhance the pedestrian environment along Van Ness Avenue.
- o To preserve architecturally and historically significant buildings.
- o To encourage new development to contribute positively to the visual and urban design quality of the street.

A concurrent environmental assessment of each conceptual alternative assisted in the selection of the best alternative policy guideline and land use regulation which form the basis of the plan. The following plan approaches, which are manifest as plan policies, are related to environmental impacts identified in this Initial Study as insignificant based in part on the fact that these policies would mitigate otherwise potentially significant impacts. Plan policies related to potentially significant effects of the project will be discussed in the EIR.

Potential impact: Development of existing small parcels with small, box-like structures which, because of their size, would not incorporate attractive and/or efficient design features.

Proposed mitigation: Assembly of small parcels into larger parcels.

Relevant plan policy:

Policy 4: Encourage large lot development.

Potential impact: Development of parcels out of scale with the existing local and areawide land forms and citywide urban design goals.

Proposed mitigation: Maintain existing height limits which mimic the street's natural land forms and encourage development to this maximum limit.

Relevant Plan policies:

URBAN DESIGN

Visual Form

Areawide Objectives and Policies

OBJECTIVE 1: To Enhance the Natural Land Forms along the Van Ness Corridor with New Development.

Building Form

OBJECTIVE 2: To Maintain and Enhance the Street's Visual Form and Resources.

Potential impact: Development out of scale with the pedestrian environment.

Proposed mitigation: Design new buildings to provide articulated building bases and active ground floor uses to create a positive human scale at street level.

Relevant plan policies:

Visual Form, Objective 2, Policy 2:

Policy 2: Strengthen the area's existing scale as well as emphasize the predominant height of significant buildings by maintaining in the high density mixed use development area (Subarea 3), a generally uniform street wall with a deep setback above this street wall.

Visual Form, Objective 2, Policy 3:

Policy 3: Conform building shapes to bulk controls. In higher height districts require conformity to controls which are designed to encourage sculpturing and articulation of building towers, particularly at the upper levels.

Streetscape/Building Facade Treatment

OBJECTIVE: To Create and Maintain an Attractive, Interesting Streetscape with a Human Scale.

Open Space and Greenspace

OBJECTIVE: To Develop a Greenspace System within the Sidewalk and Street Median Space which would Create a Distinctive Identity for the Avenue.

Potential impact: Generation of adverse wind conditions at pedestrian level and within open space areas.

Proposed mitigation: Incorporation of design features on all new developments which would provide wind protection and sun exposure to private and public open space areas.

Relevant plan policies:

RESIDENTIAL LIVABILITY

OBJECTIVE: To provide Safe and Attractive Environments within each Mixed Use Development.

Sun, Shade and Wind Protection

Policy 2: Design housing projects to maximize sun orientation and natural light exposure to individual units. Incorporate design features which would provide wind protection and sun exposure to private and common open space areas.

E. MANDATORY FINDINGS OF SIGNIFICANCE:

		Yes	No	Disc.
*1.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number of restrict the range of rare or endangered plant or animal, or, eliminate important examples of the major periods of California history or prehistory?	___	X	___
*2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	X	___
*3.	Does the project have possible environmental effects which are individually limited, but cumulatively considable? (Analyze in the light of past projects, other current projects, and probable future projects)	X	___	X
*4.	Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	X	___
*5.	Is there a serious public controversy concerning the possible environmental effect of the project?	___	X	___

The project may include development which may contribute incrementally to cumulative adverse impacts on the City's transportation systems energy resources, historic/cultural resources and generalized perceived neighborhood scale and quality.

F. ON THE BASIS OF THIS INITIAL STUDY:

____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

____ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers _____, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

_X_ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Robert W. Passmore
Assistant Director of Planning
--Implementation
(Zoning Administrator)

for

Dean L. Macris
Director of Planning

Date: June [illegible]